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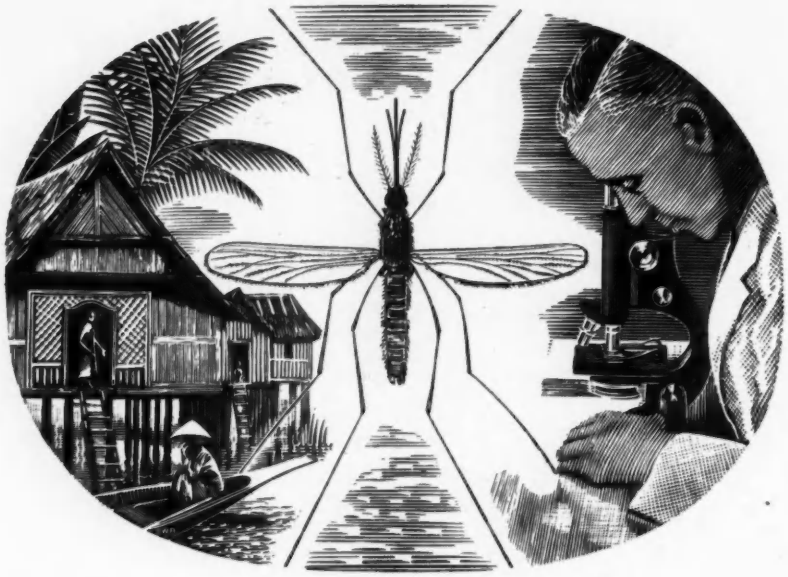

Man Against Mosquito

MALARIA has killed more men than wars have ever done. Its conquests in days gone by have played a large part in determining the pattern of civilisation. Even during the last war, its influence was felt in many theatres of operation. It often caused more casualties to Service personnel than were inflicted by the enemy. Prior to 1925, the only anti-malarial in general use was quinine. In that year the synthetic compound pamaquin was introduced, to be followed by mepacrine in 1930. Although these drugs represented a great advance in the prevention and treatment of the disease, it was not until 1944 that efforts to find a more effective and less toxic drug resulted in the discovery of 'Paludrine' in the I.C.I. research laboratories. The new drug proved supreme in the protection and treatment of all those working in malarious areas and, after being in use for some eight years, it is established in world medical practice as a vital attacking force in the fight against the disease.

In numerous countries 'Paludrine' is being used extensively by Governments, large employers of labour, the armed forces, and in countless households. In Korea, the incidence of malaria was exceptionally low among those troops of the Commonwealth Division who received the drug as a matter of routine. Furthermore, 'Paludrine' was one of the drugs carried by the successful Everest expedition. Tested in war, proved in peace, 'Paludrine' is playing a significant part in safeguarding the health of millions of people of many races and creeds. It is only one of the discoveries of world significance which have accrued from I.C.I.'s research and development programme—a programme to which the company devotes no less than £8,000,000 per year.

Imperial Chemical Industries Limited

ICI

NUMBER 76
APRIL 1955

Contents

COLUMN INTO CLOCK 8

TEA CENTRE
Wyndham Goodden 9

THE POINTS OF A TEAPOT
D. M. Forrest 16

FURNITURE SURVEY: 2
Dining tables and chairs
A. Gardner-Medwin 17

IN ALL DIRECTIONS
Noel Carrington 23

REVIEW OF CURRENT DESIGN 28

GLASS FIBRE IN USE
F. C. Ashford 30

FROM VICTORIAN TO MODERN 40

ELECTRONICS ILLUMINATED 42

PACKAGING NOTES 44

NEWS 45

LETTERS 47

BOOKS 48

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Design

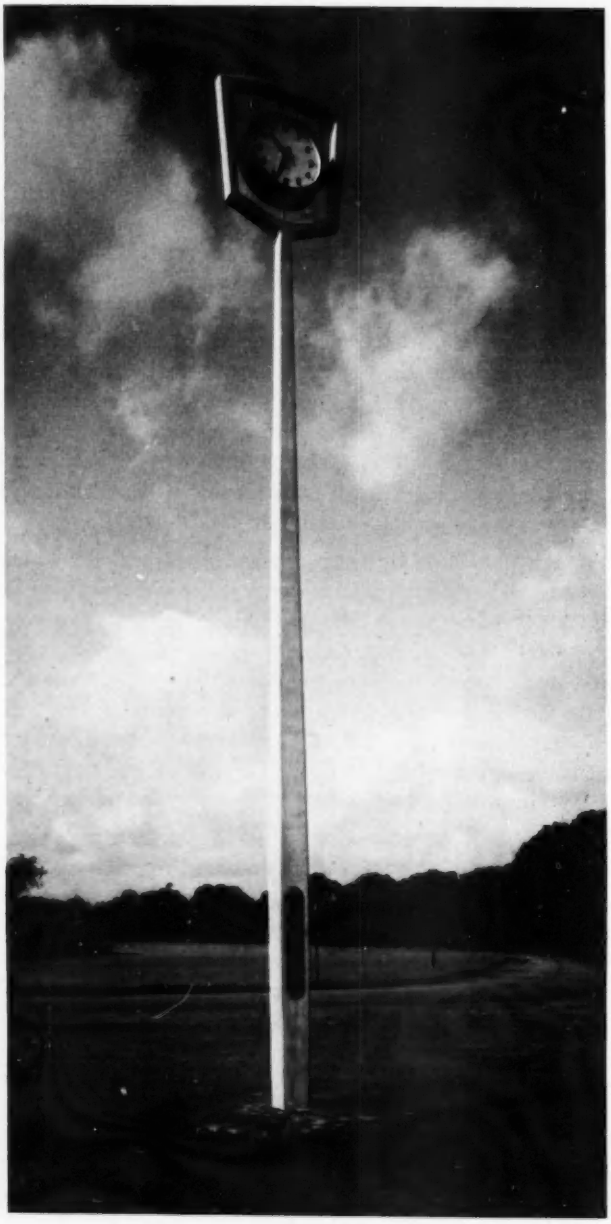
Strategy and tactics

IN ATTEMPTING TO RAISE design standards it seems there are two schools of thought which have utterly opposed methods of approaching manufacturers and retailers. The first sees most of them as potential friends: the second sees most of them as likely enemies. The first seeks to exhort, to criticise constructively and to encourage: the second to castigate and to abuse. In many cases the sincerity and belief in the importance of good design is the same in either camp. Indeed, one does not have to delve far into history to see that there comes a time – early or late – in many men's lives when sincerity merges into fanaticism. Then it is no longer possible for them to believe there can be another point of view.

We belong unashamedly to the first and less spectacular group, which we feel is far more likely to achieve the object we have in view. The Russian technique leaves us cold. But as we have seen several examples lately it is perhaps not unreasonable to re-state our creed because manufacturers are apt to lump together all those who say that there is much bad design around and something should be done about it. And those critics who glory in provoking a fight think that all others are chapfallen and timid. So we are sometimes looked upon with suspicion by both sides.

Let us be clear on this matter. There is much bad and some terrible design at most trade shows. But there are responsible people in every trade who know this and who deserve praise for their efforts to improve matters, often against great odds. And such improvement cannot come about overnight. To suggest, as one speaker did recently, that all the firms producing well-designed goods should pull out of a trade's annual exhibition and hold a show of their own is dangerous nonsense. More firms producing first-rate things are wanted in the market place, not less. And, after all, the number is increasing. Why destroy the goodwill of potential allies by the indiscriminate heaving of bricks? We have never hesitated to call a spade a spade, but always, we hope, without any personal attack or rudeness. And we are encouraged by the results.

Column into clock



SINCE THE COID accepted the responsibility of co-operating with manufacturers in the work of improving the standard of design for street-lighting columns and of maintaining an approved list (DESIGN September 1954), many requests have been received from local authorities, lighting engineers and architects for details of the designs.

It was unusual to meet an architect who wished to use one of these column designs for a purpose other than that for which it was originally intended, but Denys Hinton, faced with the problem of designing a public clock for Leamington (presented by the local Round Table to commemorate the Coronation) realised that a special design for the supporting column would involve heavy expenditure on moulds and tools, which would be uneconomic for a single unit.

Mr Hinton selected from the wide range of new standard column designs the 'Broadcrete' reinforced concrete column used for main road lighting, made by Concrete Utilities Ltd. The design, originally prepared by A. M. Rankin and much admired since its inception in 1950–1, was chosen for display at the Festival of Britain and for installation in the same year at Lansbury, Poplar. It was the first of the new designs to adopt a pronounced entasis for the main shaft contours – a registered feature which set a definite style to be followed in various forms by other firms.

The success of Mr Hinton's adaptation for this public clock shows the versatility of a good basic design, and owes much to the care with which the reinforced concrete hoop and the stone base have been detailed. The Gent electric clock is suspended within the hoop by $\frac{5}{8}$-inch diameter bolts passing through tubular spacers. It has two faces, each operated by a separate electrical movement of standard pattern, the supply cable passing through the column in the same way as for street lighting. The dials of the clock, which are 24 inches in diameter and approximately 25 ft above ground level, are white with black hands and Arabic numerals. The case itself is finished bronze.

The base of the column is in blue Hornton stone, and reproduces the Round Table device with alternate segments 'pecked' to denote the blazon. An aggregate matching the stonework was used in the mix for the concrete column and hoop which have a smooth ground shingle finish.

T CENTRE

Itself an exhibition, the Tea Centre in London has for more than eight years opened its doors to all who want to show good design and all who want to see it.

Wyndham Goodden

THE TEA CENTRE CELEBRATES the age of the tea drinking habit in this country with, amongst others, a portrait of Dr Johnson – whose passion for tea is as famous as it was phenomenal. In those days tea was precious and expensive, as the many beautiful caddies and teapoys with their locks and keys still show. Today it would be difficult to find a single man or woman in England who did not drink tea more than once a day. The worst part of wartime rationing, to many people, was the diminution or dilution of their 'cuppa'.

This familiarity however, without breeding contempt, has its dangers. It has led, for instance, to those hundreds of thousands of depressing tea-shops up and down the country whose only recommendation is that they do serve tea – of a sort. Tea of a sort has, in fact, come to be the absolutely minimum requirement for any place of refreshment. Happy state of affairs as this may be for the tea industry, it is only

The decoration on this page is reproduced from a wallpaper designed by Sheila Stratton for the Tea Centre.

The original interior of the present building, designed and fitted out as the London showrooms of Elkington's. If this has any merit, it is the entire absence of self-consciousness: everything from kitchen lampshades to coronets.

The ground floor, after Leander's reconstruction of the building, designed by Misha Black for the Ontario Services Club during the last war. This design established the style, however later modified, of the present Tea Centre.

happy up to a point. It does no good to the producers and blenders of any of the finer teas which need care in preparation for the table and which need palates of some discrimination: and it is not a state of affairs to withstand competition – as witness the immediate success of the now numerous well-designed quick-service bars specialising in caffè expresso. One wonders what would happen if drug stores on the American pattern, with their great variety of mixtures, were to start operating in this country.

This need to re-educate the public on the virtues of their central deity was first foreseen by the Tea Bureau, which began work soon after the International Tea Market Export Board had been set up in 1935. The first organising director of the Board was Gervas Huxley, who had been with Sir Stephen Tallents and Frank Pick on the Empire Marketing Board: and it is directly through this pedigree that one can trace the Bureau's – now the Tea Centre's – adherence to the highest standards of design.

The Tea Centre, to a Londoner, has become such a national institution – although it is in fact financed today entirely by Ceylon – that by naming it one seems to span the post-war years as comprehensively as if one listed all its admirable exhibitions and activities. The building was originally the London house of Elkingtons, designed in the florid style of 1870 to take the place of a number of buildings in Nash's Lower Regent Street. In 1930 it was reconstructed by Leander Ltd: and in 1943 the lease was acquired by the Tea Bureau for a post-war Tea Centre. For the remainder of the war, however, it was lent to the Ontario Services Club, with the stipulation that Misha Black should re-design the interior with a view to its eventual function. On July 15 1946 it was opened as the Tea Centre, but not before it had shown its hand as an exhibition centre by housing what was perhaps the most advanced exhibition seen in England up to that time, 'The Progress of British Chemical Research' for Imperial Chemical Industries. This exhibition introduced to London the work of Basil Spence and James Gardner, whose reputation as exhibition designers was consolidated a year later with the opening of 'Britain Can Make It'. Whatever may be said about the things themselves which Britain could and did make at that date, there was no question about the dash and brilliance with which they were displayed.

It is impossible without a long appendix to give a list of all the exhibitions, all the occasions on which good design has been shown to the public, which the Tea Centre has sponsored since then: an average of three major projects every year since 1946, and countless minor ones. Such a list would show nearly every name in this country, and many from abroad, in the front rank of architects, of designers of household goods, and of designers of display – Misha Black, Sir Hugh Casson, Finn Juhl, Basil Spence, Robert and Roger Nicholson, Richard Guyatt, Eden Minns, Henrion, Vicke Lindstrand . . . and of painters, Edward Bawden, Ruskin Spear, Laurence Scarfe, John Farleigh, Susan Einzig, Barbara Jones. It would be invidious to pick out any which particularly pleased the author, since some were remarkable for

(Continued on page 14)

Symbol for the Tea Centre designed by Peter Ray.

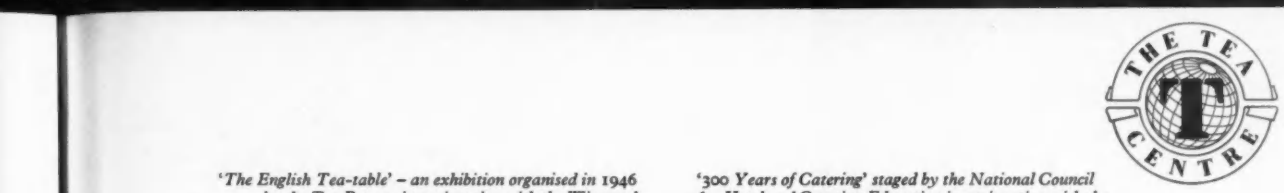
The present entrance hall as it has been ever since 1951, when Maxwell Fry and Jane Drew remodelled it. John Farleigh's mural painting is on the right. The balcony of the main exhibition rooms faces out over the reception desk and is reached by the short mezzanine staircase – the entrance to the tea lounge leading off beneath it.

H R H the Duke of Edinburgh examining a goblet engraved with the royal arms during his visit to the Council of Industrial Design's exhibition of Coronation souvenirs at the Tea Centre.

RIGHT The illusion of great space in the Tea Centre's exhibition hall created by Finn Juhl's display of Georg Jensen silver and stainless steel in 1954.

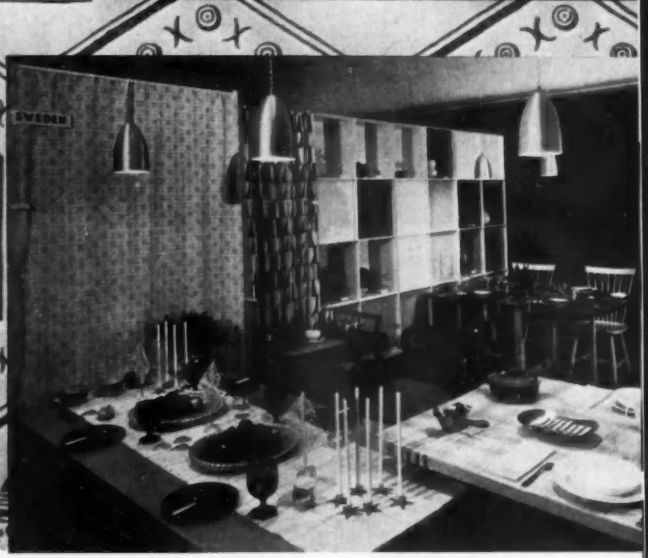
ABOVE A close-up view of the new balcony and staircase, with a showcase in the foreground showing specimen silver teapots of the last 250 years. The excellent lighting can be clearly seen.

An imaginary room, in 'Hospitality at Home' – an exhibition staged by the CoID jointly with the Tea Bureau in 1951: designed by Robert and Roger Nicholson.



'The English Tea-table' – an exhibition organised in 1946 by the Tea Bureau in conjunction with the Wine and Food Society, designed by Misha Black. The proper silverware and china were displayed with their contemporary furniture.

'300 Years of Catering' staged by the National Council for Hotel and Catering Education in conjunction with the Tea Bureau in 1946: designed by Richard Guyatt, Hugh and Margaret Casson.



A display from the Council of Industrial Design's travelling exhibition 'Round the Table' designed by Lady Casson. First shown at the Tea Centre, it later visited retail stores.

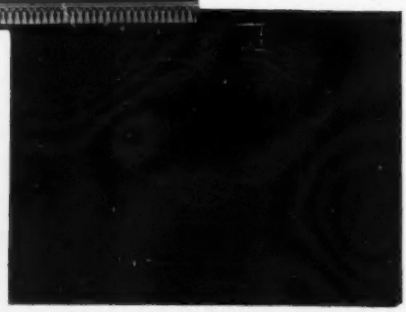
'Scandinavia at Table', an exhibition at the Tea Centre in 1951 staged by three Scandinavian Societies of Industrial Design, at the invitation of the CoID and the Tea Bureau.

Booklet designed by Laurence Scarfe for the Festival of Britain year, 1951, and printed by The Curwen Press.

The tea lounge at the Centre with 'Race' furniture and 'Poole' pottery tea service in green and white. The growing tea bud is used as a decorative motif on the panelled screen.

LEFT *Designed by Clarke Hutton and printed by The Curwen Press.*

BELOW *Designed by Charles Hasler and printed by Lund Humphries.*



the design of the objects shown – silver, glass, furniture, plastics, porcelain or whatever it might be – some for the way they were displayed, some for both equally: and because these exhibitions were not mounted by the Tea Centre as such, but were sponsored by it as part of its policy to attract and instruct potential customers by making itself a centre not only of tea but of design. Of all the exhibitions dealing with tea, or at least with food and drink, perhaps the most charming and memorable was one held early in its career, 'The English Tea-table' designed by Misha Black.

The foyer of the present building was redesigned by Maxwell Fry and Jane Drew in 1951, about the same time as Denys Forrest, who had been in charge of its admirable publications, became commissioner. The result of these changes was, architecturally, to give better circulation, more exhibition space and a closer integration of the Centre's main activities: politically, to unify the Centre's design policy through every phase of its work from letter headings, labels, cutlery, publications, competitions, to the administration of the building itself.

If to the question "Where is such and such an exhibition to be held?", one gets the answer "at the Tea Centre", it is today almost a guarantee that this will be a stimulating exhibition. The Council of Industrial Design chose it for its exhibition of furniture and of 'Coronation Souvenirs' in 1950 and 1953 respectively: and ICI who held the first post-war exhibition on its premises, returned to it in 1954 with a display of plastics mounted by Edward Price. Scotland has several times been represented: in 1952 with Scottish crafts, embroidery and needlework in 1954, and towards the end of last year with 'Highland Home Industries'.

But its exhibition activities are hardly more than window dressing for the serious work which goes on behind, to help the grower and the grocer sell, the consumer make and enjoy, ever better and more fragrant tea. No wonder that the tea bush is botanically a camellia – perhaps the most beautiful and certainly the most beautifully named of all flowers.

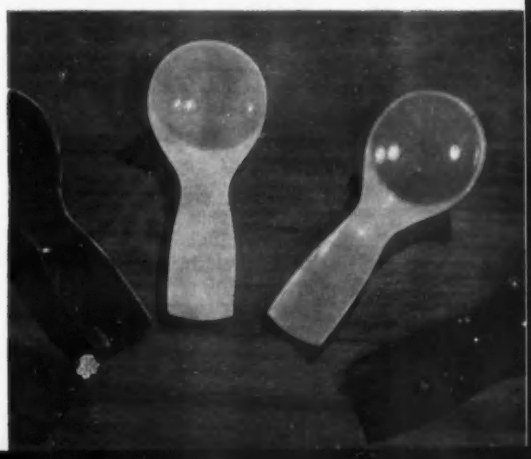
With such a start one would think the brew itself could hardly descend to the blackish, brackish depths not unknown to most of us. It was a surprise to this writer, believing that the Chinese purists drink their pale infusion *au nature*, to find that Indians, producers of hardly less delicious Darjeeling, are apt to drink their tea, at any rate in the Punjab, as thick and sweet as ever came from one of Her Majesty's galleys. But then do not Tibetans take it topped with rancid butter? There is evidently plenty to be done to educate all of us: and the Tea Centre does this by sending out the most delectable travelling exhibition of pavilions designed by the Nicholson brothers, by commissioning designs for a silver tea-service, for caddies and caddy spoons – a competition for students of the Royal College of Art – for tea packets and labels, retail displays, models (it gave Cockade its first commission) for maps, a wallpaper; indeed by never forgetting that in the field of design, as in the English parlour, however many or few persons may be gathered together, it is always possible, it is always good, it helps to waft the fragrance of good leaves to heaven, to add one for the pot.

A still from 'A String of Beads'; one of many documentary films dealing with tea production made for the Tea Bureau.

A large part of the Centre's work concerns the retailer. These displays help him to make the most of tea, and are particularly valuable in conjunction with the travelling exhibition.

A model of the attractive travelling exhibition 'Ceylon – Home of Good Tea' designed for the Tea Bureau by Robert Nicholson. This exhibition will tour the major cities of Great Britain.

Caddy spoon of silver and ivory inlay designed for the Tea Centre by M. B. A. Yehia of the Royal College of Art.



Plastic spoons designed by G. G. Bellamy of the Royal College of Art for the Tea Bureau. It is claimed that they will not bury themselves in the tea caddy.

D. M. Forrest

The points of a teapot

D. M. Forrest

Commissioner, The Tea Bureau

IN OCTOBER LAST, a contribution to the DESIGN correspondence on 'Disappointing Pottery' brought forth quite a number of suggestions, but not the perfect teapot. To help forward the search, it might be interesting to look at the 'points of a teapot', as illustrated by the nine casually chosen specimens on this page.

In our common experience a teapot should be:

MECHANICALLY EFFECTIVE For example, one prefers that the tea should come out of the spout rather than the lid! Amazing how often it doesn't. And when the tea does emerge, it should be deposited in the cup and not drip on to the table. Easy enough with a metal teapot, very difficult, it seems, with pottery. Teapot No 1 does seem to be absolutely non-drip. Could the same result be achieved more gracefully?

EASY TO WIELD A teapot should please the hand as well as the eye. No 2 is a real beauty in this respect, as indeed in many others. Good marks to any manufacturer who before marketing his pot actually fills it with tea, picks it up and notes the reaction of his fingers and wrist.

STURDY Your teapot lives dangerously. Spout, handle and lid are in jeopardy several times a day. For general sturdiness the stoneware pot No 3 ranks high. Incidentally it almost dead-heats for the non-drip stakes. But the last sentence of 1, above, applies!

SECURE A potter showing me his new shape the other day remarked how convenient the knob was for holding the lid on with the other hand while pouring out. Very convenient indeed, I said. One-armed readers of DESIGN can have confidence in most of the pots shown here. No 4 is one of those that has a locking device, but in fact does quite well without it.

CLEANABLE "A good large lid to facilitate cleaning", we always say, and with British hypocrisy ignore what happens in the spout. Hence no doubt the bright thought embodied in No 5. But see the sub-heading 'Teapot-ness' below!

GOOD-LOOKING A vague, moot word, but my remaining points of a teapot are really sub-divisions of it:

Balance The basic structure of the teapot as a work of art and use. Exemplified in No 2 perhaps, or the eternal classic calm of No 6.

Surface Texture Something, please, between the 'daintiness' of commerce and the dourness of the Cornish theorists. No 7 has at least that particular quality of the 'old brown teapot'. No 8 offers the charm of a simple celadon glaze counter-changed with white.

Teapot-ness My plea last October was not for eccentric novelty, but for the evolving tradition which I think DESIGN wants too. So I finish with No 9. Just a teapot after all.

1 *Alcock, Lindlay & Blore*

2 *Rosenthal*

3 *Denby*

4 *Worcester*

5 *Spode-Copeland*

6 *Wedgwood*

7 *Holdsworth*

8 *Poole*

9 *Avoncroft*

FURNITURE *survey*

Dining tables and chairs

A. GARDNER-MEDWIN

The second of a series of articles on modern furniture selected from 'Design Review', the illustrated record of current British products now to be seen at the London headquarters of the Council of Industrial Design.

In March, fully upholstered chairs were considered in DESIGN. The following groups of furniture are to be discussed

Occasional chairs	MAY
Bedroom furniture	JUNE
All-purpose chairs	JULY
Storage units	AUGUST
Occasional furniture	SEPTEMBER
Outdoor furniture	OCTOBER
Kitchen furniture.	NOVEMBER

ALTHOUGH THE SALE of dining-room suites must still be prodigious, nowadays there seems less cause to buy this furniture *en suite* than there was before the war. There are two main reasons for this: first, many of us no longer have a separate dining-room and therefore do not have space for the traditional sideboard, table and four chairs in our living room; and second, even where there is a dining suite the pieces are generally not limited to use at meal times. Tables may therefore need to be suitable for purposes other than meals, just as dining chairs can always be used away from the table. In these days, too, the sideboard is seldom used exclusively for the storage of linen, cutlery and glass. For these reasons, only dining tables and chairs are being considered at this stage of our furniture survey; sideboards will be discussed later separately, and in terms of storage furniture suitable alike for living room and dining-room.

The surprising feature of dining tables is that their basic design has remained unchanged over a period of centuries – due to the fact that the requirements they have to fill have also been unaltered. For instance, even in more 'spacious' days, a table was required to expand or decrease in size according to the number of people it had to accommodate, and we find virtually the same methods of doing this used today as in the seventeenth, eighteenth and nineteenth centuries – draw-leaf, drop-leaf, gate-leg, and, in smaller tables, the swivel

top. Chairs have perhaps altered rather more–but only recently, and mainly due to the new materials and methods now being employed. Even so, the basic shape remains the same, and through the ages designers have rung the changes mainly by decorative design and materials. Thus each period has produced its own characteristic appearance. For if it is true that 'nothing is ever new', it is equally true to say that things are never quite the same.

Shown here are a few of the more interesting items in 'Design Review'. In analysing dining room suites many of the chairs were found to be a little disappointing, often lacking in good proportion and refinement. This is not surprising, as it does not follow that a good cabinet maker is always a good chair maker, and the sideboard is usually the dominant piece.

A light attractive dining table with a new version of the Windsor-type chair. The woods used are sycamore and beech. It is interesting to see such simple traditional chairs take on quite a sophisticated air. DESIGNER Ronald Ingles. MAKER Heal & Son Ltd.

Simple, strong and easily moved around, this is an excellent example of an inexpensive machine-made chair. Its character comes from the pleasantly shaped and curved back, and the slight overhang on the front and sides of the upholstered seat. DESIGNER Robert Heritage. MAKER G. W. Evans Ltd.

A strong and elegant chair, morticed and tenoned throughout. This well-made and finished design, manufactured by an old established firm of chair makers retails at well under £6. MAKER E. M. F. Brown (Quality Town) Ltd.

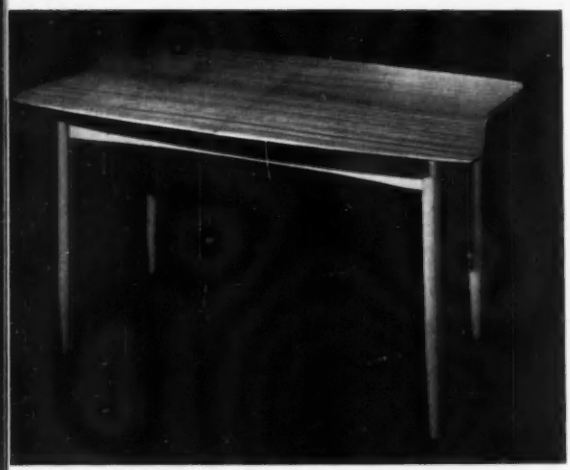
To use a traditional base with a modern back panel is a bold experiment. In this case it has produced an original and interesting chair which is comfortable and cheap. The use of the solid frame with the laminated back gives the chair an extraordinarily perky look. DESIGNER David Fowler. MAKER D. Meredew Ltd.

LEFT *Another round dining table employing a metal frame. The top is veneered in walnut.* DESIGNER Robin Day. MAKER S. Hille & Co Ltd.

RIGHT *Not likely to be taken for a reproduction, yet it is not difficult to recognise its tradition and trace this chair to High Wycombe. It would feel at home in practically any setting. A strong and honest design and its selling price is very reasonable.* DESIGNERS Geoffrey Dunn and E. L. Clinch. MAKER Goodearl Brothers Ltd.

It is rather surprising that the gate-leg table is not more popular than it is, as it has such obvious advantages for the small room. This version, which folds very flat has been pleasantly shaped so that the lowered flaps do not appear clumsy. DESIGNER Ian Audsley. MAKER G. W. Evans Ltd.

BELOW *A good table when closed is often spoilt when extended. This example is particularly happy either way. The chamfered edges, shaped rails and tapered legs, give this straightforward table an appearance of elegance and quality.* DESIGNERS Professors R. Y. Goodden and R. D. Russell. MAKER Scottish Co-operative Wholesale Society Ltd.



ABOVE *It is difficult to ring the changes on the shape of a table top and at the same time remain practical. Provided one does not use a cloth the inverted ends work well in practice, and give the top an interesting pattern.* DESIGNER Peter Hayward. MAKER W. G. Evans & Sons Ltd.

Here strength and elegance have been successfully married. This particular chair – although designed primarily for dining-room use – has also been used over the past few years in boardrooms. DESIGNER W. H. Russell. MAKER Gordon Russell Ltd.

A generous upholstered dining chair. The cutout in the back enables one to sit well into the chair. The sweep of the back leg helps to give the 'flow' which is so apparent throughout. DESIGNER Peter Hayward. MAKER W. G. Evans & Sons Ltd.

An example of a more luxurious table extending to 8 ft 10 inches and made in solid mahogany, with the top veneered in Xevasinga. The X construction of the legs features rather more prominently in the photograph than it does in fact. The chairs are beautifully finished and would be equally useful as occasional chairs. DESIGNER J. Christopher Heal. MAKER Heal & Son Ltd.

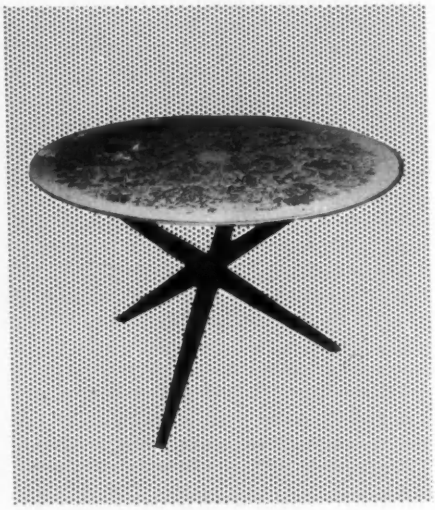
A circular table with an interesting underframe. It is priced at a remarkably low figure. MAKER Bath Cabinet Makers Ltd.

Fast becoming a classic. Designed in 1946 *this cast aluminium chair fits in well with wooden furniture and is now being used in many parts of the world. An added advantage is that it can be packed flat and easily assembled.* DESIGNER Ernest Race. MAKER Ernest Race Ltd.

Another chair from Heal's which looks inviting to sit in. Traditional in design, its forbears obviously mixed in the right circles. To produce such a chair requires close co-operation between designer and maker. DESIGNER A. J. Milne. MAKER Heal & Son Ltd.

Perhaps a little aggressive in appearance, this chair is nevertheless extremely comfortable. The moulded seat and the angle of the back are specially designed for this purpose. 'Dunlopillo' is used on the seat and back. DESIGNER Nigel Walters. MAKER Andrew A. Pegram Ltd (for Heal & Son Ltd).

Recently there has been a noticeable increase in the demand for more luxurious modern furniture. This dining table (part of a suite) is the answer from one manufacturer. It is beautifully finished and made of mahogany veneers, yewtree and yewtree veneers. Legs are fluted. It extends from 5 ft 6 inches to 7 ft 6 inches. DESIGNER Frank Whitton. MAKER Gordon Russell Ltd.



RIGHT *Round tables have many advantages to offset their disadvantages. Here the top has an impregnated pattern in the 'Formica', in lime green and yellow on a white ground. The legs of beech are stained and polished black.* DESIGNER Robert Heritage. MAKER G. W. Evans Ltd.

Another example of more luxurious furniture, designed with foreign markets in mind. There is an interesting use of brass rod for the underframe of the table. Mahogany, rosewood and sycamore are the woods used. The table extends from 6 ft to 9 ft. The mahogany chairs are interesting because the legs are all perpendicular to the floor. The loose cushions sit on wide leather thongs. DESIGNER Robin Day. MAKER S. Hille & Co Ltd.

It would be hard to find a simpler chair than this. Its character and quality spring from the materials used (mahogany and black hide) and the detailing of the back. DESIGNERS Tom Lupton and John Morton. MAKER L M Furniture Ltd.

IN ALL DIRECTIONS

Noel Carrington

Mr Boyd-Carpenter, Minister of Transport, recently announced that his road-building programme, involving an expenditure of £212 million, was "intended to provide an up-to-date road system": there had been few major improvements and little new construction on our roads since 1939. Now is the time to point out that any "up-to-date" scheme must take account of road signs, whose cost in improvement would be a mere fraction of this expenditure.

A MOTORIST driving through half a dozen European countries (as often happens today on even a short holiday) is bound to notice the varying standard of road direction signs. He might well expect, now that travel is so largely international, that the common denominator approved by international conventions would be applied everywhere. The English motorist will be still further shocked when he realises, as he drives to his home from the port, that his own road signs are still the most inadequate of all. This subject has been discussed frequently in Parliament and elsewhere. The official answers are usually that the task of erecting road signs is shared by many local authorities and therefore uniformity is hard to obtain; that road signs are better than they used to be, but a new system would entail great expense; or that the present

1 *The A A, the local council, the Presbyterian church, and possibly others, have made the lamp-post look even more clumsy than it was before. The most legible of the directions is 'Keep to the Left', advice so obvious that its sign could afford to be the least conspicuous. Compare the letters 'Great West Road' (which appear twice) with the directions on a German autobahn,* 8.

signs have had the approval of many notable committees. All this is no doubt true, but it does not alter the fact that we are behind the times. A great many signposts hark back to the days of dog-carts and pedestrians. The standard advance direction signs are bad in almost every detail. The signposting in cities is erratic. Street names are often not where they are naturally sought. All this delays motorists and is irritating and even dangerous at critical moments.

Advance direction sign

Take the advance direction sign first of all, 1–4. The purpose of this sign is to warn the driver in good time of a possible change of direction or of a junction. The driver may be approaching the sign at anything between 40 and 60 mph. That means the time available for reading the sign is fairly short (depending of course on his length of vision) and it is important that he should not have either to slow down suddenly or take more than a momentary glance from the road itself. The English signs, approved in 1933 and formerly erected by the R A C with government approval, are faulty in several respects. The road numbers, although too small, take precedence in position and size over the place name, which is also too small (two inches only in height) to be read at a distance. The assumption that drivers carry the road numbers in their heads (except occasionally on planned 'tours') has long been the official reasoning. The 1944 Committee of the Ministry of Transport confirmed this arrangement though not without a protest on the part of one signatory. No designer or typographer was invited to sit on the committee.

Names and backgrounds

Recently the Ministry of Transport has been erecting these signs with larger backgrounds, the ground being coloured lemon yellow in order to isolate the number and name, 4. While this slightly assists emphasis, it does nothing to overcome the basic failing of these signs. By typographical standards the lettering is inefficient, for A LONG LINE OF CAPITALS is less easily read than a line of what printers call upper- and lower-case, where ascenders and descenders distinguish the shape of the word. Newspapers are well aware of this, as of course are advertisers. Both the Swiss and the German autobahn signs avoid the capital, 7 and 8. I must admit that authorities whose opinion I greatly respect still favour the capital, but the real test is legibility at speed and from a distance.

There seems difficulty in obtaining agreement on the most suitable colour for names and backgrounds. Black letters on a white ground are commonly used in England and also in France. In Germany on the autobahns white on blue is used. In size, positioning and legibility the autobahn signs are ahead of anything else in Europe. The ordinary road signs in Germany still use black on yellow enamel, not unlike the A A signs in England, 13, but they lack, to my eyes, good legibility at night, when signs are even more important than by day. Why the signposting of so many routes in England (especially diversions) is left to private motoring associations instead of being the province of a highway authority, is a mystery I cannot attempt to solve, though their assistance on special occasions, such as exhibitions or races, is welcome enough.

A special type of signposting long current in France and indeed all over Europe is the system of by-passing through-traffic from town centres, 6. You are seldom in doubt when approaching a city or indeed when wishing to get out of the centre. In most English cities this service is either non-existent or frankly chaotic, though a few counties have recently made amends. London itself has at last blossomed out with a belated flowering of long distance signs. These signs are particularly encouraging because they do in effect mark a breakaway from the route number obsession, the place-name being given the greater prominence. If they often lack clarity it is because they are imposed on top of and in addition to nameplates of less significance, which may easily succeed in catching the eye first. Thus while it may be useful to know that the Baptist Chapel or Swimming Baths are to the right, and often highly important to locate the Public Convenience, it is better not to superimpose these directions on top of the sign to Potters Bar or Cockfosters.

The confusion which is so common in our signposting derives presumably from our tendency to patch and compromise, but must always exist where the function remains in the hands of local surveyors, who would rather please their fellow townsmen than the passing motorist, 1. (I doubt whether we have yet ceased to regard the motorist as an extravagant, reckless and overbearing member of the community to be tolerated chiefly for his ability to pay taxes.) In any case the general lack of plan in our cities, the disorderly growth of advertising and the frequent gloom, all tend to make orderly direction a difficult task; but equally they make signposts a more important job for authority than where spacious planning has been the rule. Indeed the argument often put forward officially that a proper road system is almost impossible because we live in a small congested island is faulty because

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2 Village Green sign in process of becoming a main traffic sign.

3 The R A C made a great improvement when it introduced these standard junction signs, but the route numbers are still twice as large as the place names. The Southampton sign is obviously an afterthought.

4 The Ministry of Transport's new illuminated signs, of which there will be about 1,800 in London, have white panels on a lemon-yellow background. The numbers are now smaller in relation to the place names, but this has been done because of the large amount of information that must be conveyed. It is for the public to decide whether it would prefer the new practice to be extended.

6

The French road signs by Michelin are usually clear and well placed, and are in concrete with black lettering on a white ground. The national route number is in white with a red ground.

9

A bulbous welcome in reflecting metal.

In Switzerland, below, and Germany, below, right, even greater clarity is achieved by the use of capitals and non-capitals. Variation in the size of letters, always large on the main routes, produces a more distinguishing effect, as does the use of white on a blue ground.

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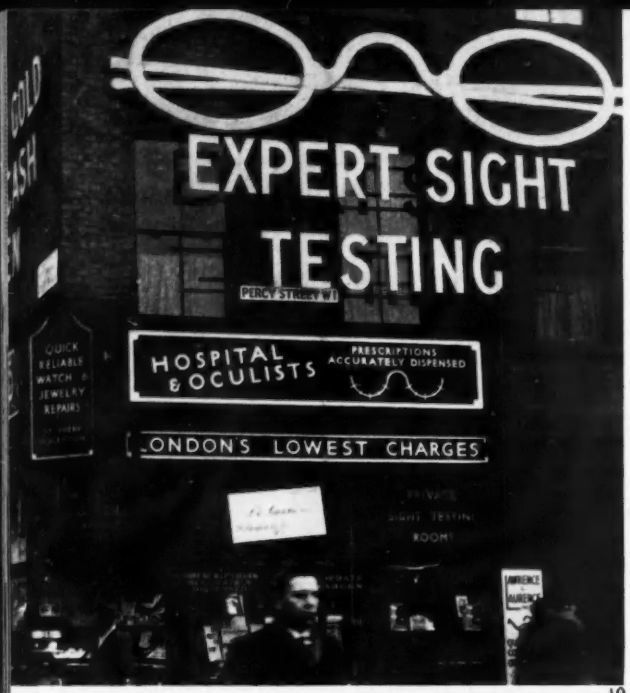


10

London: Find the street name in Percy Street, which is an important one-way thoroughfare.

11

London: Motorists driving north who wish to turn left into Stephen Street, next to Percy Street, find no easily visible street name.

In Hampstead white letters on black tiles are often used. Among the most attractive of street names in London, they are marred only by the uneven spacing of the letters – a defect emphasised in this example by the s *being placed upside-down.*

12

13

An occasional sign by a private organisation.

the smaller our living space, the more necessary an efficient system of communications.

The naming of streets has often been the subject of complaint and the Design and Industries Association made an early onslaught in the 'twenties on the worst offenders. In passing it should perhaps be recorded that the reformers of that period, though justified in their call for better lettering, were not always well advised in what they advocated. This was due partly to the veneration felt for the Roman capital, in particular the capital letter of the Trajan Column. Indeed I think many letterers were privately pained when Edward Johnston designed the *sans-serif* (block letters) for Frank Pick and the London Underground Railway. It was sound to condemn the over-condensed letters which were then frequently used by local authorities, but the capital letters which took their place, though more dignified and also more legible, would have been better replaced by non-capitals in the majority of street uses. Since that time (nearly 40 years ago) many boroughs have improved the individual style of *letter* but not the legibility of the *words*.

Uniform nameplates

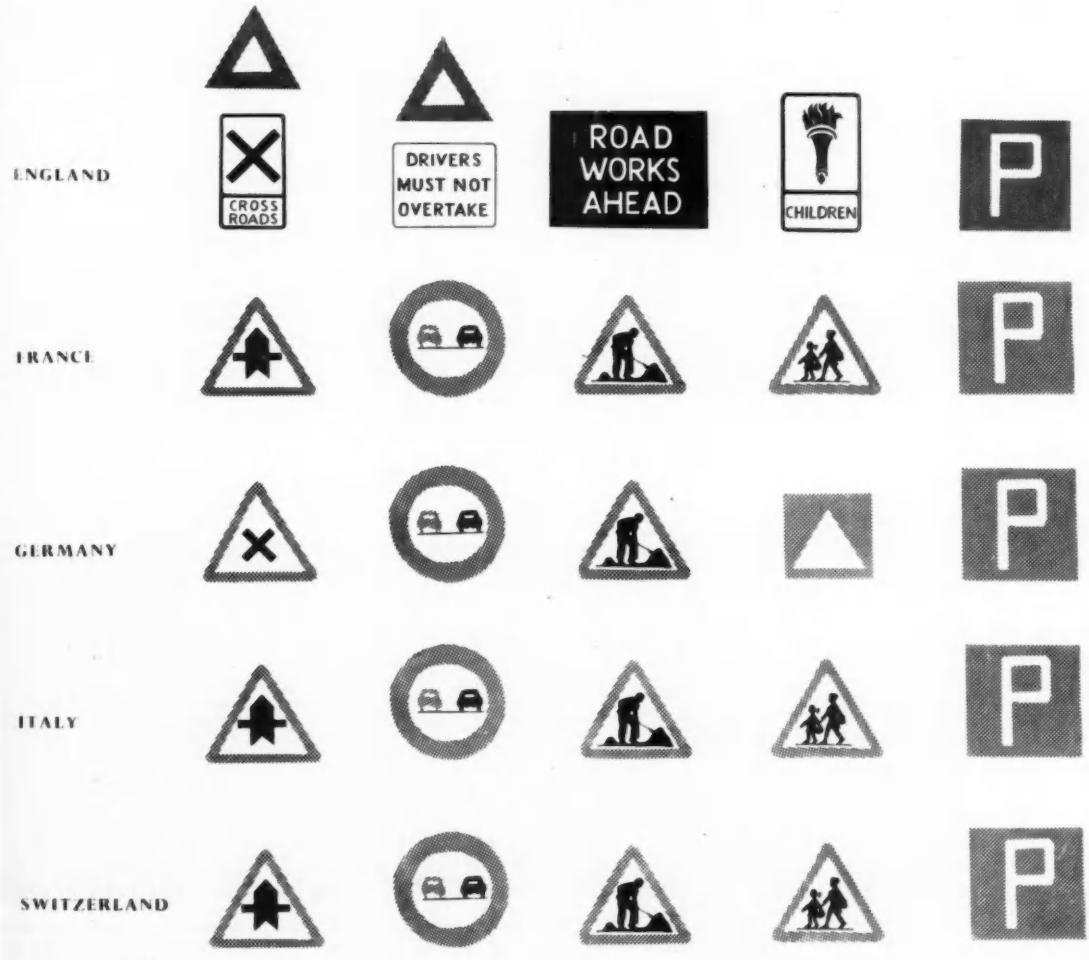
Thus the white roman capital letter on a black tile (in use in Hampstead, **12**) is magnificent at close range, but the spacing of tiles presents difficulty, as also their placing on walls. A uniform nameplate for the whole country would be more sensible, or, while the present names could remain, a street name on a post at the corner of the pavement could be placed at uniform height. If the house or shop numbers to left and right are added (as in Germany) much questioning and parking of cars is saved. The height at which street names are commonly fixed in central London often makes them invisible to the driver of a private car, **10** and **11**. Again, the assumption appears to be that the citizen knows his way about, and the foreigner (that is to say anyone from outside the town) is too much of a nuisance to bother with.

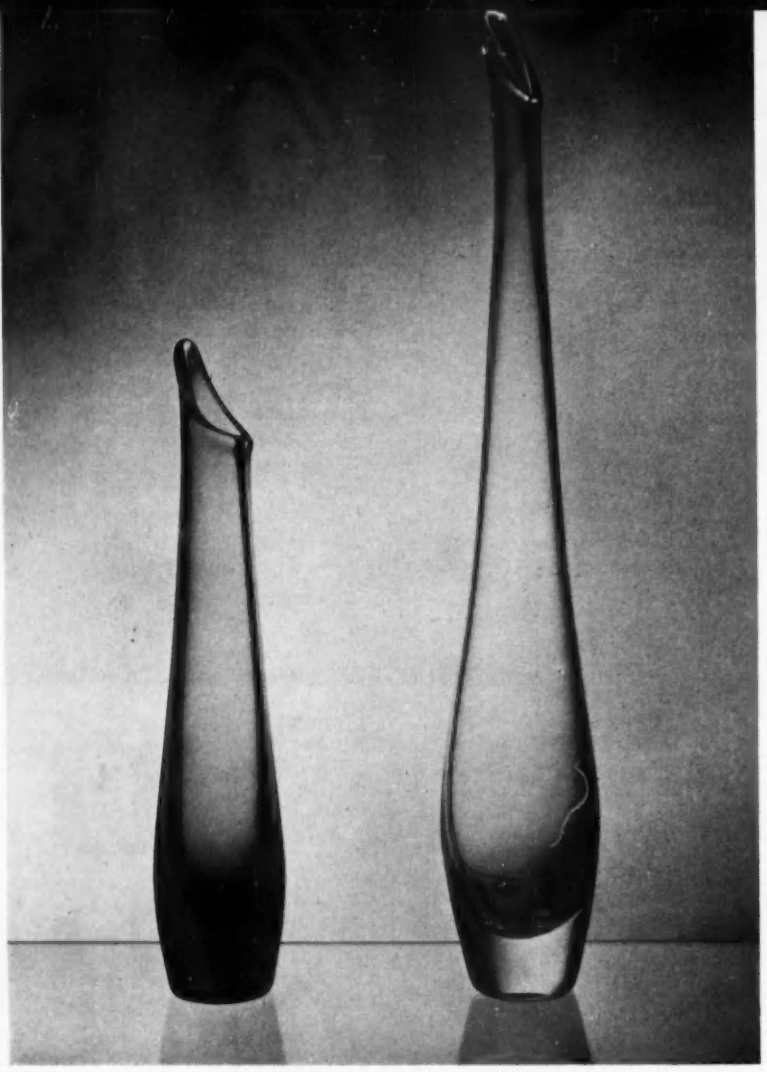
A puzzle is presented when we try to find numbers of shops and houses. Do the owners want to hide themselves from callers? As often as not no number is to be found at all. A fancy name perhaps, but the number, if ever it were allocated, has vanished. The French are reputed to be individualists who will defy any bureaucracy, but for generations they have submitted to the rule of a uniform house and shop number, white figures on a small blue enamel plate. How simple and how effective! And if a standard number plate on our car, why not on our house. Who can say?

International co-operation?

There is one final section of the road sign business that might well be the subject of closer international co-operation. On the Continent the warnings for obstruction, one-way traffic, schools, level-crossing and so on are more or less uniform. They are easily understood and almost always well placed. In fact nearly all European countries now subscribe to the international conventions of 1931 and 1949, from which for some reason we decided to hold aloof. Our own signs are somewhat similar (for bends in the road for instance) but they could with advantage be brought into line with Continental practice, both for the benefit of Continental motorists coming here and for our own when we go abroad. Perhaps it is too much to hope that we should alter our perverse rule of the road (though in the past we have conformed to changes in the calendar, to say nothing of changes in religion), but where in matters of design we discover we have something really important to learn from abroad, it is both foolish and damaging to our reputation to remain insular and inefficient. Our master letterers of the last generation were held in great respect abroad. In this matter of signs we have done them little justice in their own country.

14 *In road signs, international co-operation is largely a Continental affair. In these examples Great Britain prefers words as well as symbols, and like Germany does not use a special sign to indicate a minor road crossing or major road.*

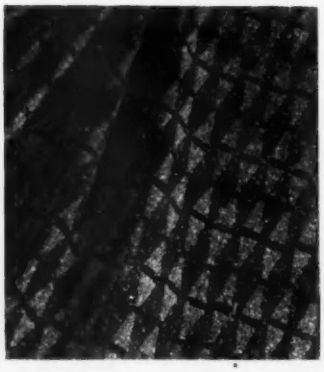




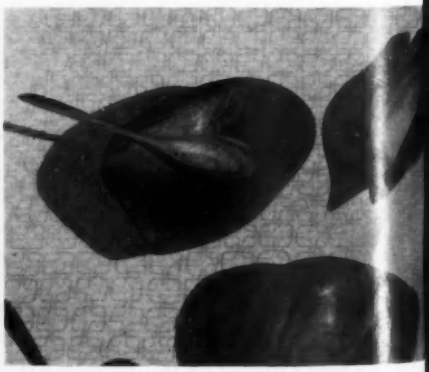
REVIEW OF CURRENT DESIGN

The items shown have recently been accepted for inclusion in 'Design Review', the illustrated record of current British products, to be seen at the London headquarters of the Council of Industrial Design.

These undecorated pieces rely for their effect on a direct expression, in the finished article, of the sluggish flow of molten glass from the glassblower's pipe. Their tall, thinly tapering necks are strongly influenced by Scandinavian design but would demand careful placing out of reach of children or pets. Maker James Powell & Sons (Whitefriars) Ltd.



The textured weave of this fabric adds depth and sparkle to the simple geometric motif. It is included in an exhibition 'Adventure with Colour' which is being shown in leading stores up and down the country. Designer Tibor Reich. Maker Tibor Ltd.



Leaf-like in appearance, these elegant hand-made bowls make the most of the qualities of the plum and yew woods used. Whether they are sufficiently stable for holding sugar and salt – for which they are designed – is a matter of opinion or experience, but they are in a mood very popular today. Designer and maker A. K. Claiden.

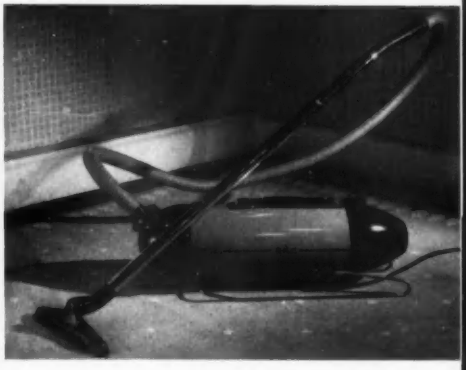
This fitted beauty case is a piece of design and workmanship that has an obvious mark of good quality. The case is of pigskin, morocco or other leathers, and bottles and jars are of polythene. Maker S. Clarke & Co Ltd.

An air of lightness is a characteristic of much of the best modern design, and in the lamp on the left the more sensitive turning of the base, as well as the darker wood, will be added assets when used with old furniture. Designer Richard Chick. Maker Richard Chick Ltd.

Although shown here in white, this gas cooker, in common with an increasing range of kitchen equipment, is finished in a variety of colours and combinations of colours. The forming of the front panel has been carefully considered and gives this cooker a quality above the average. Designer Eric J. Marshall. Maker Thomas De La Rue & Co Ltd.

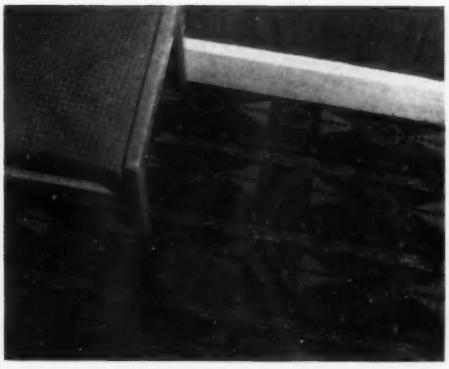
An interesting new use of synthetic resin-bonded hardwood is shown in this fuel hod. It is naturally light, highly resistant to heat and abrasion by solid fuels, and easily cleaned with a damp cloth. Designed specifically for use with modern open continuous-burning grates. Maker William Mallinson & Sons (Manufacturing) Ltd.

A neat, well detailed train case fitted with waterproof tray, take-out mirror and plastic bottle holders. The elliptical shape is a new idea but perhaps an unlikely one for the convenient folding of lingerie. Designer J. A. Hanauer. Maker W. Wood & Son Ltd.



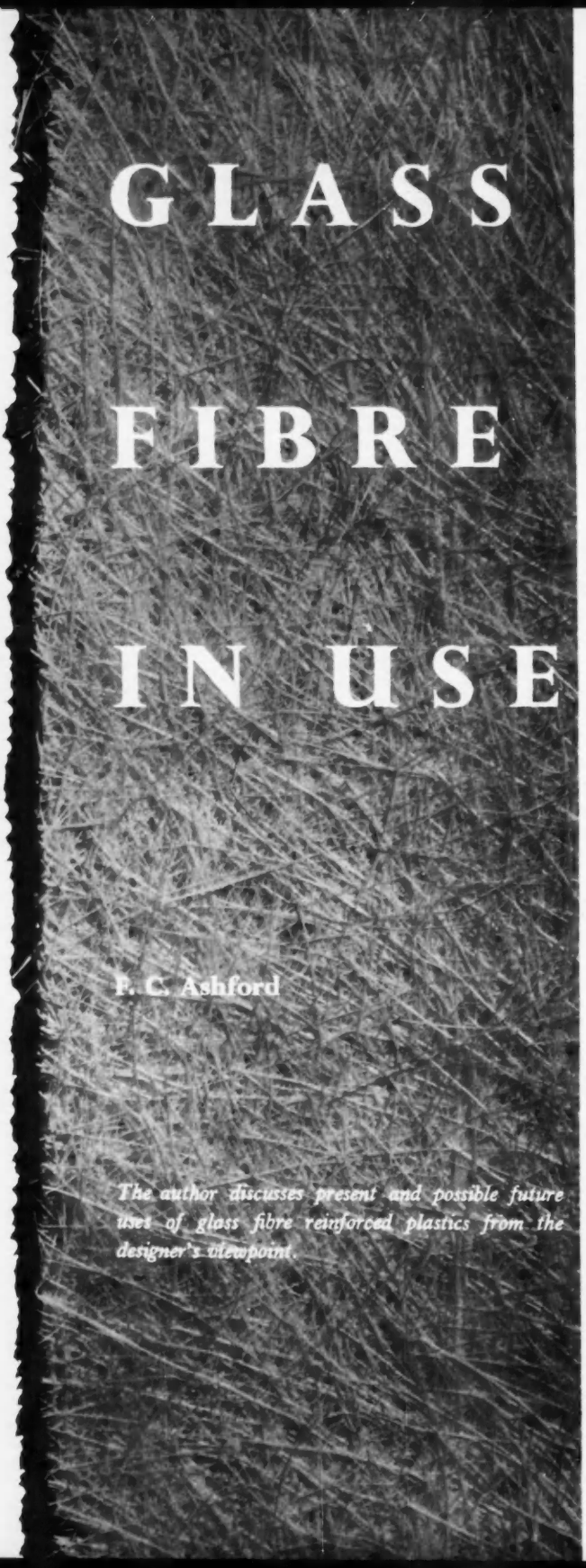
The increased attention now paid to convenience as well as to performance is well typified in this domestic cleaner. It is easy to assemble, has a kick button switch and is light to handle. It is finished in grey and maroon. Maker General Electric Co Ltd.

This portable fire is a good example of the care which is being paid today to the appearance of gas equipment. In sheet steel and cast aluminium, it is sensitive in detail and has a poise that would make it acceptable in any room. Designer W. Symes Watt. Maker William Sugg & Co Ltd.



It is questionable if continuous stripes are suitable for carpeting, but here is a design which covers the surface well, has variety of scale and deep, rich colours. The bold introduction of a simple form of Adam motif will allow this design to be adapted to many different settings. Maker James Templeton & Co Ltd.

An altogether charming combination of two shapes which contrive to send the bulk of the light down while allowing enough to escape upwards to prevent strong contrast. Maker Frederick Thomas & Co Ltd.



GLASS FIBRE IN USE

P. C. Ashford

The author discusses present and possible future uses of glass fibre reinforced plastics from the designer's viewpoint.

ONE OF THE MORE TOUCHING beliefs of this age is that we shall one day discover a wonder material possessing all of the virtues of existing materials – plus a few of its own – and which will be suitable for universal application. Superficial examination of what has already appeared in the newspapers about 'glass' mouldings may have suggested to some that this hope had at last been realised. The truth, as presented by the more responsibly minded technical press, is that while there has been a resurgence of activity in the field of reinforced resin materials, sufficient to justify a great deal of enthusiasm and optimism, there is no call yet for metal magnates to start hurling themselves from the tops of their palatial headquarters.

But while accepting that we have not yet been confronted with the ultimate wonder material, and being mindful of the snags as well as the advantages, it is clear that we now have a constructional material with great potentialities and which offers considerable facility to designer, fabricator and manufacturer alike.

There is nothing new about the idea of reinforced resin materials themselves; what is new is the development of low-pressure resins which cure without liberating water, and require neither heat nor pressure, although these may sometimes be desirable to increase the rate of production. While these resins can be employed with a variety of reinforcement materials, they provided a very happy solution to what could be done with glass fibres, which were already in limited use but whose superior properties – particularly their very high tensile strength – were waiting to be more fully exploited. Since the combination of glass fibres and polyester resins produces laminates with the best all-round characteristics, this article deals chiefly with them; but it should be remembered that there are other resins and other fibres which may be particularly suitable for certain applications.

It is not intended to go into the various methods of fabrication and production which have been adequately described elsewhere, but to examine some of the aspects of the material likely to influence its adoption and the design of products manufactured from it. That this article is only about half as informative as one would wish, is at once a matter for satisfaction and regret. Here is a field without precedent or conventions; without a background of design and production techniques. It offers facilities for

which the designer has long cried out; it is attractive and exciting. But, being a new field it offers very little in the way of factual information. Design and production techniques other than those based on empiricism have yet to be developed, and the most desirable knowledge – being often dearly bought – tends to be closely guarded. With the terrific amount of development taking place in all directions it is clear that here is a subject about which it is ridiculous to attempt in any way to be authoritative. One can only look at what has been done and ruminate upon what might be done. Until the passage of time throws more light upon some of the longer term aspects, opinion on what is good or bad design or fabrication technique must, for the most part, be deferred.

Established and apparent drawbacks

Perhaps the best way to approach the subject is to ask "Why *should* I use glass fibre laminates ?", and one of the first considerations is cost.

Cost is the greatest apparent drawback to G F Ls. Pound for pound they cost about five times as much as most common metals; but it must be remembered that because of their very high strength : weight ratio and the way in which they lend themselves to double-curvature, forms of adequate strength can be produced from a smaller quantity of material. Also, one or more of the definite or apparent advantages may easily outweigh this higher basic material cost.

Low specific stiffness is probably the greatest of the established material drawbacks, but here, good design technique and the favourable strength : weight ratio may produce mouldings which are structurally satisfactory and still economic – particularly if some of the other known advantages operate as already mentioned.

Rate of production might prove to be a drawback in some cases. Low-pressure mouldings curing at low temperatutes cannot obviously have a high production rate, especially as they are mostly 'laid up' in the mould by hand. The use of matched tools and pre-impregnated reinforcement, preform, or 'dough' moulding can greatly increase production rate, but introduces conventional and special moulding equipment. There would seem to be a stage where all the advantages of handling facility disappear, and only some outstanding material characteristics remain to make the G F L economic.

Established and potential advantages

Manufacturing facility is probably the greatest advantage, and this covers not only ease of fabrication but the possibility of realising forms which might not otherwise be practicable. For example, several of the smaller car and motor cycle firms have produced bodies and housings which they could not have done economically in metal with the large capital investment essential for conventional tooling.

It is not difficult to think of many other products whose appearance and function would be improved through the simplicity of form and construction arising from large scale tooling, but whose present scale of production makes this uneconomic.

Designing and fabricating

The advantage of easy fabrication is a very real one. It is not uncommon for a design to go into conventional production before everyone concerned is perfectly satisfied with it; this is often necessary or production might never start. With normal, tooled production, the introduction of modifications is usually expensive, sometimes impracticable. But with G F Ls it is simple.

With a one piece male or female mould, much can be done in the way of altering wall-thickness; changing positions of joint lines (where the moulding is to be subsequently divided for parts to be hingeable or removable); providing additional points of attachment for sub-structures, and so on – all without alteration to the mould itself.

Modification of the mould itself is far easier, quicker and cheaper than of conventional tools. It is probably only a plaster, concrete, sheet metal or G F L mould, and the new mould may be made direct from a modified moulding without the drawing office or the toolroom becoming involved.

Only where matched tools are used does this advantage tend to disappear, but many of these are of cast iron or aluminium or some low melting point alloy and could be cast directly from the modified moulding, or an impression of it, at a fraction of the cost of the machining involved with conventional tools.

Strength and endurance

At the present stage of design knowledge, the ability to vary the wall thickness and the strength of the moulding is invaluable. It can be done if necessary between one moulding and another, enabling all current experience to be embodied. Any need for increased stiffness, greater strength or additional attachments can be met, as well as any changes felt desirable for aesthetic reasons. These changes can be made at the time of moulding; alternatively it is possible to make the greater part of them at any time afterwards.

The technique of 'making one and kicking it around to see if it is strong enough', is likely to prove more effective for a great many applications than a high-level approach involving attempts at calculating stresses and sections. While some more preconceived notion of the result is desirable with larger and most costly structures, the impression gained from reading between the lines of information published by fabricators is that design is often arrived at on a basis of comparative tests of structural elements, rather than by precise calculation.

Coupled with this lack of knowledge about design is lack of knowledge about fatigue and the performance of G F Ls over a considerable number of years. Accelerated weathering and endurance tests do not necessarily produce the same answer as time itself, but it is considered that the physical life of a G F L should be about the same as that of a similar aluminium structure. The Navy, which is very hard to satisfy in these matters, has accepted for service a G F L reconaissance craft for use after subjecting it to the usual rigorous trials.

Ability to vary the strength of laminates is another very real advantage. It can be done by the choice of the type of reinforcement, and by its disposition. The tensile, flexural and impact strengths can all be varied by orientation of the fibres to suit, or by incorporating suitable fillers in the resin. Woven cloths have greater strength than mat, which has very little inherent strength, and there are thick cloths and thin cloths, cloths with uni- or multi-directional weaves, with close or open texture and with varying glass contents.

One of the largest GFL jobs so far; a 45 ft hull for a motor cruiser. The repetition of the crisp plane of the transom and the gouged line both characteristic of wooden construction, is perhaps debatable; sharp edges tend to produce 'resin-rich' areas vulnerable to impact. Halmatic Ltd.

Form out of structure

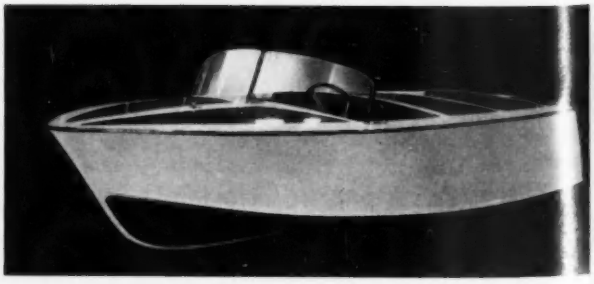
Cloth is much dearer than mat (which is quite adequate for many applications) but produces stronger laminates. Its ability to 'drape' in or over the mould varies considerably and the complexity of the design will obviously affect the amount of tailoring necessary.

Thin cloths produce laminates with the highest tensile and compressive strengths; laminates using thicker cloths have higher impact strength. The impact strength of mat laminates is only a little less than cloth laminates, but they have a third to half less tensile strength.

It is helpful in visualising the requirements and effect of reinforcements to consider the analogy of reinforced concrete. Concrete alone has very high compressive, but little tensile strength; the more evenly distributed and highly stressed the reinforcement, the greater is the tensile and flexural strength.

The physical requirements of a moulding will affect

To overcome the low specific stiffness of GFLs, this very pleasing hard-chined hull of the Moonfleet 'White Lady' motor-boat employs bulkheads and a nicely moulded strake worked into the chine itself. Powered only by a 10 hp engine, this 13 ft hull can travel at 30 mph. F. Hutchings & Sons.



The texture of GF mat with pigmented resin. On vertical surfaces, such as this, a suitable filler must be added to make the resin thixotropic (to prevent it running away from the reinforcement). This picture also shows built-in stiffening ribs, corresponding to the frames or timbers of conventional boat construction. **Halmatic Ltd.**

RIGHT *As with other processes, high finish means a really good mould surface. In addition to showing clearly the high standard achieved by many boatbuilders, this picture is evidence of excellent mould-release; neither result being by any means as easy as it appears.* **W. & J. Tod Ltd. Copyright 'Plastics'.**

The hull of this Magdalen College, Oxford, rowing ight, exclusive of the woodwork, was laid-up and moulded in one day in 'Deborine', a proprietary brand of GFL. Complete watertightness due to absence of nuts and fastening holes, and the almost negligible increase in weight due to water absorption (about 5 per ent of wooden construction) are of particular interest with this type of craft. **Halmatic Ltd.**

it aesthetically in a number of ways. If it is not to become too expensive, or to lose too much of the favourable strength: weight advantage through heavy sections, stiffness must be provided by strongly curved sections and/or additional stiffening elements. Aircraft manufacturers achieve additional stiffness by applied G F L ribs, hollow or balsa cored, or by ribs formed by cords which press the first laminate into grooves in the mould. Boatbuilders employ transverse bulkheads, flat or of box form and girder sections in the way of gunwhales, bilge-keels and chines. While wood or metal stiffening elements can easily be incorporated, it would seem desirable to avoid them as far as possible, since it is not yet known how these inclusions are going to behave over the years. An advantage of G F Ls is that any stiffening elements, indeed any substructures, can be added without weakening the main structure with screw or rivet holes. The specific stiffness of G F Ls is only about a third of that of many aluminium structures and less than that for steel.

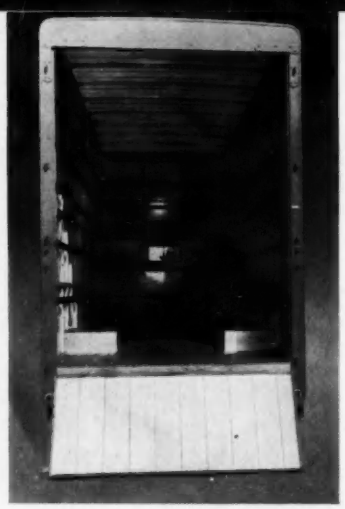
Weight

The weight of G F Ls can generally be reckoned on a basis of 1 oz per cu inch of material; sample laminates show 28 oz per sq ft for a thickness of $\frac{7}{32}$ inch and 13 oz per sq ft for $\frac{1}{8}$ inch. Since laminates of $\frac{1}{16}$ inch thickness are quite adequate for many applications, particularly if the design is arranged to the best structural advantage, the comparative lightness of G F Ls is clearly a great advantage.

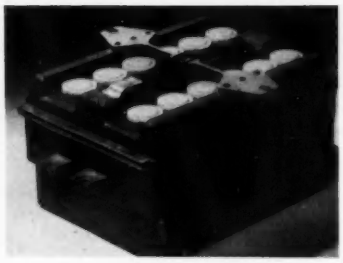
For example, a laminate having the same tensile strength as steel would be only three-fifths of its weight; with the same flexural strength, only half the weight. In comparison with aluminium G F Ls are as light, or lighter, depending upon the grade of aluminium. This economy in weight is of course reflected in many cases in further economies in supporting structures and motive power requirements. These are some of the less obvious advantages which only time and use can prove.

Aesthetic qualities

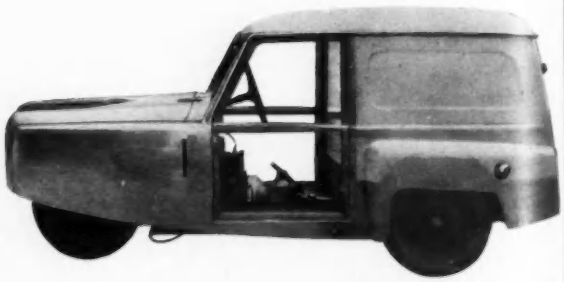
The natural aesthetic quality of mat or woven cloth tends to be disappointing in the moulded state. In the raw they have an attractive texture, but when moulded the mat produces a somewhat restless, unfinished appearance and cloth, either through the requirements of draping, tailoring or mere handling is subject to distortion of the weave, overlapping and changes in reflective value which can be disturbing and unsightly. In any case a good appearance requires a good gel coat



Remembering the usual dark cavern echoing with cries of "To you" and "From me", the advantage afforded by the light-transmitting qualities of G F Ls is evident in this photograph of the 'Luton' pantechnicon with 'Plastaloy' roof (G F L panels and aluminium extrusions). Arlington Bodybuilders Ltd.

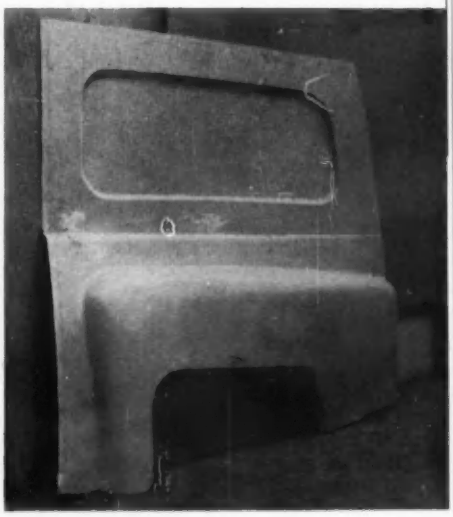


Preform-moulded aircraft bat tery box. The textur of th reinforcement can be clear seen through the lightly pig mented resin, and the hig surface finish results from th use of matched tools. Extrem lightness, coupled with hig impact strength (the walls hav an average thickness of $\frac{1}{16}$ inch plus resistance to corrosion an adequate justification for us British Moulded Plastics Ltd.

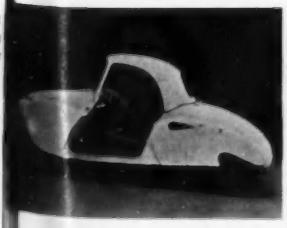


The virtuosity of the material, if nothing else, is well illustrated this very curvaceous body for the Allard 'Clipper' family car. This an example of overall styling being made possible, with relatively smal scale production, through the use of G F Ls. Allard Clipper Co Ltd.

A complete GFL body for the Jensen 541 4-litre saloon, one of the many applications of the material in the transport field. The finish and general elegance compare very favourably with normal metal construction, and the lightness no doubt contributes a great deal to the high performance of this car – 110 mph and more with overdrive. Jensen Motors Ltd.



LEFT and RIGHT *The 'Reliant' 5 cwt delivery van has roof, sides (including wheelboxes), rear panel, engine and propeller-shaft covers of GFL. The photographs, right, show the wooden former from which the mould for the near side was made and a moulding from it. It will be appreciated how easily changes of design can be incorporated, and the picture of the moulding is interesting because it displays the results of either imperfect mould-release or failure to work out all of the air from the initial lamination.* Copyright 'Plastics'.



This Bristol lightweight single deck bus shows how we must expect a considerable carry-over of the traditional approach to design and construction because of the marriage of GFLs to conventional materials. Front and rear domes, front and corner panels, wing valences and wheel boxes, destination indicator and luggage racks are all GF mouldings. British Resin Products Ltd.

(an initial layer of resin which is allowed to gel before lamination proper begins) so preventing textural differences due to uneven absorption or shrinkage of the resin into the grain of the reinforcement.

The natural colour of unfilled GFLs is not unpleasant, being a slightly greenish-grey with polyester resins and the characteristic amber with modified phenolics. But use of this natural colour implies acceptance of the natural texture and this should be borne in mind; fillers naturally modify the colour considerably. Laminates can be coloured by pigments, lakes and dyes to produce a wide range of colours, including black and white.

Integral finish

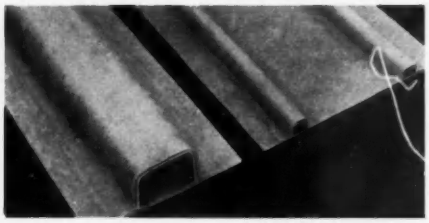
This ability to incorporate the finish is one of GFLs strong points, but a great deal of further development is required before it will entirely supplant the painting of mouldings. It is not so easy as it looks; it requires a high standard of planning and shop practice and a satisfactory technique with gel coats. Boatbuilders have possibly done as well as any in this direction, producing some very pleasant integrated colour finishes. But a boat finish is not what we have come to accept as a car finish, and except for one or two isolated examples, including preforms, I found no mouldings – certainly no production jobs – with the equivalent of a really good paint finish. Most mouldings are treated in the same way as castings and pressings, being sanded, filled and primed, then finished with one or more coats of air-drying or stoving enamel.

To indicate just how valuable an asset this integrated finish could be, I can from personal experience give the example of an 18 ft sailing boat. This costs on an average five pounds a year for paint and anti-fouling composition, when doing the application myself; where the work is done by a yard it would involve several times this sum. With a GFL hull, resistant to weather and marine growths, it might be possible to save the original cost of the hull in a relatively few years, to say nothing of the liberation from a not unpleasant but essential annual chore.

Think of the many articles where the cost of protection against the depradations of weather, woodworm, fungi, rust and corrosion far outweigh the original cost and it is easy to see what a great argument for GFLs this integral finish may become.

The extremely high impact strength is another characteristic which might alone justify the use of GFLs. The obvious examples of vehicle wings and front and rear corner panels spring readily to mind,

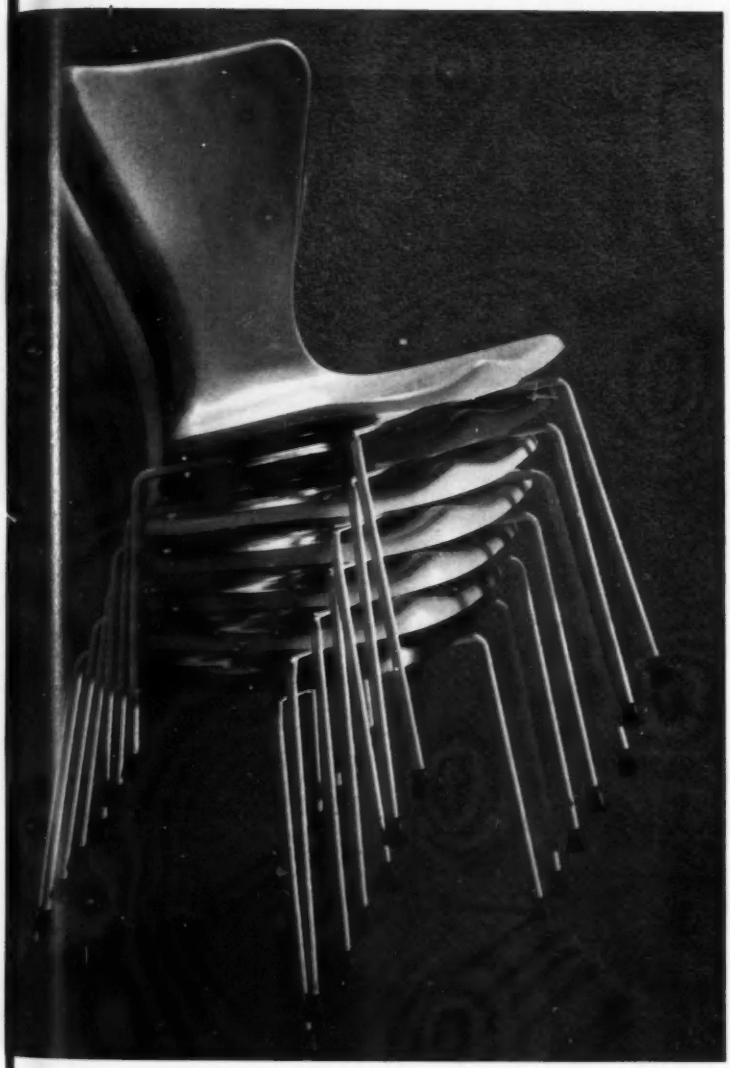
A small moulded instrument cover, showing the characteristic texture of chopped-strand mat, with that of woven cloth around the flange. With GFLs different types of reinforcement can be readily combined to produce the qualities demanded at certain points in the design. James Mitchell & Son (Greenock) Ltd.



The construction of stiffening ribs. These are built up over light aluminium formers which are left in place, but they can be formed over paper, scrim, GFL tubes or balsa cores. They are bonded to the parent mouldirg without weakening it by screw or rivet holes. Halmatic Ltd.

Underside of an invalid stool, showing moulded-in metal sockets for detachable legs. The use of metal inserts at pick-up points and stress distribution by additional local lamination enable most problems of attachment to be overcome. Yellow metals should be avoided as they are attacked by certain catalysts, and steel inserts will of course corrode unless precautions are taken to prevent the entry of moisture through the fastening holes. Stool designed and made by Richard Huws.

Corrugated 'Sarolite' roofing sheet. A case where the simple formation, calling for no 'draping' or tailoring of the reinforcement, results in an acceptable natural texture. Saro Laminated Wood Products Ltd.



A stacking chair with GFL back and seat and integrated finish, of eggshell texture, offering a choice of four colours. The legs, covered with PVC to prevent scuffing and damage when stacking, are bolted into a metal insert moulded into the underside of the seat. While this example shows considerable restraint, the possibilities afforded by GFLs to designers following the fashionable extremes of Italy and elsewhere are too disturbing to contemplate. Designed by D. Woulfe for Story & Co Ltd.

Preform-moulded safety helmets awaiting assembly of lining, chin-strap, etc. These helmets are in quantity-production and the requirements of lightness, plus high impact strength and the ability to form the deeply drawn shape, make GFLs an ideal material. Kangol Ltd.

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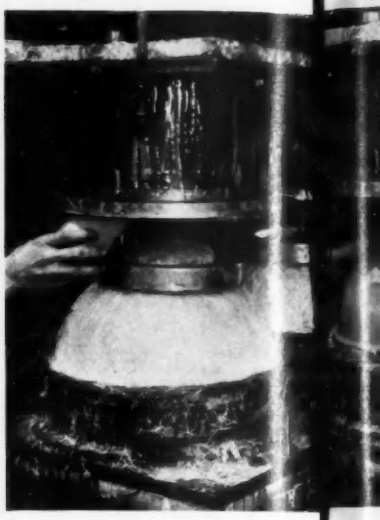


3

LEFT, BELOW and RIGHT *Stages in the preforming and moulding of a road-crossing beacon. Chopped glass fibres are deposited on the perforated former,* **2**, *by suction, then lightly bound together by a resin emulsion spray,* **1**. *The resulting preform is then placed between matching tools,* **3**, *with a further quantity of resin and the moulding completed,* **4**. *Undercuts, are not permissible and the wall thickness should remain constant.* Hawley Products Ltd. Courtesy 'British Industrial Plastics' Ltd.'

Expansion joint for laminated piping. More expensive than metal pipes, GFLs have lightness and resistance to corrosion to commend them. James Mitchell & Son (Greenock) Ltd.

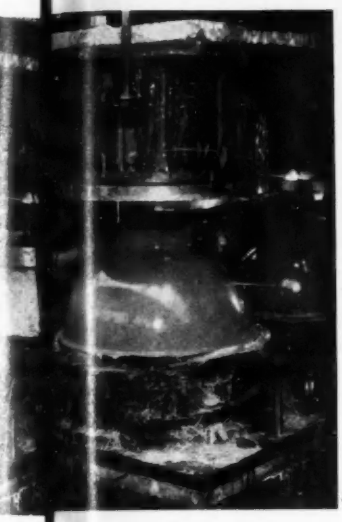
For instrument and other housings GFLs offer many advantages. They are light; will resist impact; will take a high finish; lend themselves to sleek, jointless forms and short production runs. Courtesy 'British Plastics'.

but there are many other applications ranging from machine housings to grass boxes for lawn mowers where this quality is highly desirable. Among building materials it should prove invaluable, once the cost renders it economic for widespread use. Many existing materials such as glass, glazed stoneware, cast iron and conventional asbestos products have little impact strength. Add other advantages such as lightness, translucency, integrated finish and resistance to all common – and a few uncommon – forms of depreciation and one can imagine G F Ls becoming an increasingly important building material.

That the cost will come down is almost certain. Taking the cost of reinforcement alone, that of woven cloth has been reduced to a third of what it was in 1950, while the volume consumed is five times what it was in 1951. Developments are taking place with creped paper and other reinforcements which may make possible cheaper laminates for suitable applications and there is no doubt that the cost of resins will also fall as their volume of consumption rises.

Other features

There are many other interesting features of G F Ls from the design and performance aspects; their ability



4

The finished product.

Complex forms involving undercuts or re-entrant sections can be dealt with in several ways. The mould can be arranged to be taken away in sections; the moulding can be built up from a number of smaller pre-cured mouldings;

ctions for tanks especially suit-le for corrosive liquids. The sign of the flange contributes nsiderably to the strength of the ction and is arranged so that the stenings do not come into direct ntact with the liquid. Although e optimum unit size, in view of e low specific stiffness of the aterial, is probably 3 ft to 4 ft on e side, tanks with 6 ft units have en made. James Mitchell & Sons Greenock) Ltd.

moulding can be done over a core of low melting-point alloy which is run out after curing, or over a plaster core arranged for easy removal from the finished moulding. An aircraft duct. Copyright Aircraft Production.

to transmit light and to incorporate low loading electrical elements; the ability to add fillers and other materials to the resins to give them greater fire resistance, higher impact strength, greater or less thermal or electrical conductivity, antistatic qualities and so on.

In the form of tubing they are already in considerable use for sports equipment, aerial masts, ducting and chemical piping. As press tools and jigs they are finding increasing use, and here the ability to mould direct from a prototype or model can save considerably on normal machining costs.

While G F Ls are not going to change the world overnight, we are sure to see their use extended. There are already a number of fabricators who have achieved a high degree of production skill, and more and more producers are carrying out their own experimental work.

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The pale yellow façade is framed by an asbestos roof and by white canted timber struts. The height is 22 ft and the eaves overhang about 5 ft to keep summer sun out of the bedrooms.

From Victorian to modern

NO HOUSE COULD LOOK less Victorian than the one designed by Patrick Gwynne at Blackheath. Yet such it was until German bombardment blew off the third story, and reduced the rest of the building to a mere shell. The owner, Mr Leslie Bilsby, then commissioned the architect to prepare plans for reconstructing the house, and Mr Bilsby, himself a contractor, executed them.

The two-story façade, with its canted timber struts supporting the heavily projecting eaves and balconies, its pale yellow wall, standard steel casements in fixed wooden frames and asbestos roof, has a sunny open-air quality which we associate more readily with Brazil than Blackheath. Yet Mr Gwynne's striking plan keeps largely to the original walls and uses the old window and door openings, merely raising the floor to suit the smaller scale of the interior. The terrace is also raised to a corresponding level.

In the interior we are firmly back in England again, with solid Victorian chairs and table harmonising with a bold and successful modern design. No attempt, apart from the provision of a blind, has been made to cut off the kitchen from the dining-room, and the same furnishing scheme is carried through in both. Steam and kitchen smells, which might otherwise have proved tiresome to diners, are sucked up by a powerful fan into the big black chimney above the cooker, and it has therefore been possible to enlarge the hatch between these rooms into a dresser and sideboard. This sideboard has a dark green plastic top projecting from the dark mahogany frame which, in turn, projects from the wall – a device preventing one's feet from knocking against the skirting. The skirting and the partition wall are covered with dark green canvas-like paper called 'Canotex', and the cupboards are painted grey. A commonsense safeguard is the strip of glass in the door to avoid collisions.

In the kitchen the red quarry tiles of the floor, the

ABOVE *The sideboard of yellow-green cedar is illuminated by concealed lighting in the shelf above. Note the decorative use of the chimney whose shape is well balanced by the octagonal table and the working surfaces flanking the cooker with saucepan racks beneath.*

white ceiling and grey-green walls are continued from the dining-room. Immediately on entering one is struck by the dramatic effect of the chimney, whose feudal dimensions house a light which illuminates the cooker. Equally well finished are the designer's attractive light fittings above the white plastic top of the mahogany table. The sink is of stainless steel, with a wooden screen in front for concealing pails and other unsightly essentials. Eight little holes are provided in the screen for hanging a dishcloth, when the washer-up is summoned unexpectedly from the sink to other quarters of the kitchen.

The only criticism in a well-designed scheme concerns the shelves between the kitchen and the dining-room. These cannot be functional and decorative at the same time, for if the shelves are not to be unpleasantly bare, glasses, sugar bowls and decanters which are constantly needed for use must be permanently in position.

BELOW *Partly because of the high ceiling the architect decided to combine the dining-room and kitchen with only a visual division where required. This relatively 'free' plan nevertheless preserves the character of each of the rooms.*

The conference room. Lightin fittings with the ornament star were designed by Er Sharvell. The conference tab is an extension of the Hil dining table.

Upper demonstration room. The valves can be easily inter-changed, the cathode ray tube are on adjustable brackets, and the stand is designed to be easily dismantled. The cluster of beads suspended on the right are models of crystals arranged in decorative form.

Electronics illuminated

COLOUR HAS FOR LONG been used in the electrical industry to distinguish valves, tubes, wires and so on, but seldom is it put to such advantage as in the showroom designed by Eric Sharvell for Mullard Ltd, near Cambridge Circus. Here, in a quarter of London which if prosperous is far from bright, Rapier Design Ltd has used colour to demonstrate the workings of electronics.

Electronics is a branch of physics dealing with the movement of free electrons, and the typical tool of electronics is the radio valve. The layman may be surprised to learn (after he has appreciated the excessive tininess of an electron) that while an electron moves at several miles per second in a radio valve, in an ordinary wire the electron drifts sluggishly at only one inch per second. It may therefore happen that an electron which is now passing through your table lamp will come back in six months' time, having made a round trip through the power station.

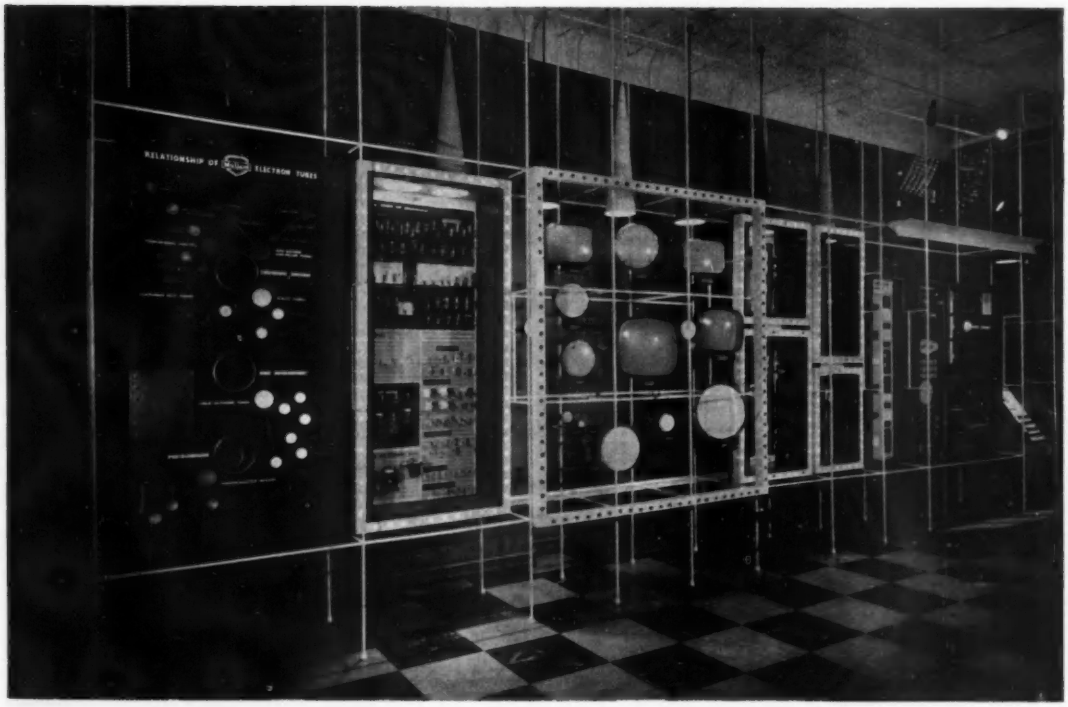
Students learning about such things often begin their course at Mullard's in the demonstration room on the ground floor. The façade, whose consultant designer was Ronald Greaves, makes effective use of Chance 'Festival' obscured glass and teak, while the cast iron columns are clad with asbestos and cased in aluminium to satisfy fire regulations. At the other end of the room is the manager's office, sheltered by a glass screen, opposite which is a striking black and yellow curtain by Arthur Sanderson Sons Ltd. This adds another dash of colour to a setting that is lit by fluorescent lights designed by Mr Sharvell.

The main feature of this showroom, which is furnished with H K chairs and a Hille sofa, is the display of illuminated panels used for instruction. The panels are controlled by six buttons, and you have only to push the one marked, for instance, 'Ionic Bombardment' to illuminate a colourful demonstration of this process in the appropriate panel. If all the buttons are pushed at once (as in the photograph) the pleasure derived by the beholder tends to be aesthetic rather than technical.

A less elaborate display of Mullard products is found in the basement, where plenty of floor space has been left for temporary exhibitions. A permanent part of the basement, however, is the cinema for 16 mm sound films produced by the firm. The inside wall is covered with black and white acoustic tiles resembling a giant chessboard, and a discreet Forrest lighting fitting illuminates the leafy plant which curls about in a chrome yellow corner.

But it is in the conference room on the first floor that visitors and students find the most elaborate provision for their requirements. This room, with standard lighting fittings and others designed by Mr Sharvell, a cross-reeded glass screen by Pollard & Co Ltd, opulent grey curtains, Venetian blinds, and a Sanderson wallpaper, is divided into two parts. If informal discussions are wanted, the visitors can lounge in the ample brown chairs encircling the coffee tables. If the talks are formal, the red chairs provide a harder, somewhat sterner backbone to the negotiations of executives aligned along the conference table.

A thick grey Wilton carpet and green chairs by the designer complete the furnishing scheme, which has taken account of every detail except the gas fire beneath the picture of Mr S. R. Mullard. R R



Packaging notes

The recent 'Packaging Exhibition' in London displayed a great variety of machines, components and manufacturing methods used by the packaging industry, as well as finished products. Some of the more interesting designs on show are illustrated here.

ABOVE *Uses for new plastic packaging materials were demonstrated in a variety of ways. These polythene bottles are from a wide range of different shapes and sizes by Fibrenyle Ltd.*

LEFT *Stoneware containers shown by the National Federation of General Stoneware Manufacturers. Left, by Joseph Bourne & Son Ltd; right, by Lovatts Potteries Ltd.*

RIGHT *Of the many machines on show concerned with the packaging industry, this automatic weighing machine stood out as an example of the confidence inspired by the good appearance of an engineering product. It was redesigned from an earlier model by John Barnes of Allen Bowden Ltd and is produced by Southall & Smith Ltd.*

ABOVE *This carton for a hair brush was designed by a student, Jillian Vasey, and was awarded a first prize in the 'Second Paper Box and Carton Design Contest'. It was shown on the combined stand of the British Paper Box Federation and the British Carton Association.*

NEWS

EXHIBITIONS

British exhibit at Halsingborg

Sir Kenneth Lee has invited the CoID to plan a British show-flat for the international exhibition at Halsingborg (June 10–August 28). The invitation follows his January appeal for funds to ensure British participation in the exhibition, and his recent announcement that sufficient money has been subscribed for space to be booked and planning to go ahead. The 'H55' exhibition at Halsingborg will be one of the most important international exhibitions of architecture, industrial design, home furnishings and crafts to be held in recent years. Organised by the City of Halsingborg and the Swedish Society of Industrial Design, and under the patronage of King Gustav Adolf and Queen Louise, it will be the largest of its kind held in Sweden since the Stockholm Exhibition of 1930. Britain, the U S A and many European nations have been invited to provide a family flat of 1,000 sq ft, fully equipped with furniture, textiles and fittings. The flat will demonstrate existing or experimental planning in each country, and is to be furnished with products as far as possible in current production. British acceptance of this invitation was delayed because no official funds could be made available, and, until recently, there was a serious risk that the invitation would go by default, although many other nations, including France, Germany and the U S A, had agreed to participate.

The CoID invited Michael Pattrick, Principal of the A A School of Architecture, to select from existing types of plans for flats one which will express the best architectural thought current in Britain today. The flat chosen was designed by Eric Lyons for use in the Parkleys Housing estate at Ham Common, Surrey. The Council has invited Mrs Jo Pattrick, an experienced interior designer, to plan the interior decoration and to select furniture, textiles, pottery, glass and fittings from the best goods in current production.

Brussels Exhibition

British firms interested in the possibility of exhibiting in the Brussels Exhibition in 1958 (DESIGN February page 50), are asked to let the Board of Trade know by April 30 this year. Notification will not commit them to taking part in the exhibition, and definite booking of space will not be asked for until late 1956 or early 1957. But by June 30, 1955 the Board of Trade needs to have some idea of the total amount of space likely to be required by British industry, so as to ensure that, in laying out the exhibition grounds, the Belgian authorities allot the United Kingdom a sufficiently large area. The official United Kingdom exhibit, which is to be organised by the Central Office of Information on behalf of the Foreign Office and which is intended to be broadly representative of this country's achievements within the main theme of the exhibition ('Man in relationship to his material environment'), is unlikely to take a form which will easily incorporate displays by individual firms. Accordingly the Government intends, provided that industry can give the necessary support, to erect a special pavilion in which space will be let at cost price to United Kingdom firms who are anxious to exhibit. A rough preliminary estimate (at current prices) of the cost of space including a shell stand is £3 per square foot. Clearly the size of this industrial pavilion will depend on the number of firms wishing to take part and on the size of their stands. Equally clearly the size of this industrial pavilion will affect the total size of the United Kingdom area, and it is the bid for this which the Government has to decide and submit to the Belgian authorities by June 30. Firms interested in the matter are asked to get in touch as soon as possible with the Exhibitions Branch of the Board of Trade, Lacon House, Theobalds Road, London, WC2. The branch will be glad to supply any information which it possesses.

Colour for Brighton

A permanent exhibition demonstrating the use and relationship of colour and design in the home was opened in Brighton early in March. Called the Brighton Colour Centre, this joint venture of two unrelated firms is probably unique in Britain, and few other centres can offer such practical guidance in the employment of contemporary design. The enterprise is due to S. L. Bowles of John Bowles Ltd, a young but flourishing Brighton firm selling only contemporary furnishings; and to Russell Perry, managing director of an old-established family decorating business. They both feel that the 'renaissance' of colour in the British home needs help and advice from the trade. The exhibition, says Mr Bowles, should give people confidence in the use of bold contemporary colour and design. The centre is intended mainly as a service to the clients of architects, builders and interior decorators, but the general public will also be welcomed. Paint, wallpapers, fabric and furniture are combined and related in a number of suggested room schemes. Tonal charts demonstrate the theory of colour relationships and their effects in home decoration.

MICHAEL D. VINEY

Art Editor's appointment

Peter Hatch, Art Editor of DESIGN since June 1952, is to take over responsibility for the Art Direction of the Council of Industrial Design's wider programme for British Industry. He will continue to be associated with the magazine as an Editorial Adviser.

American art

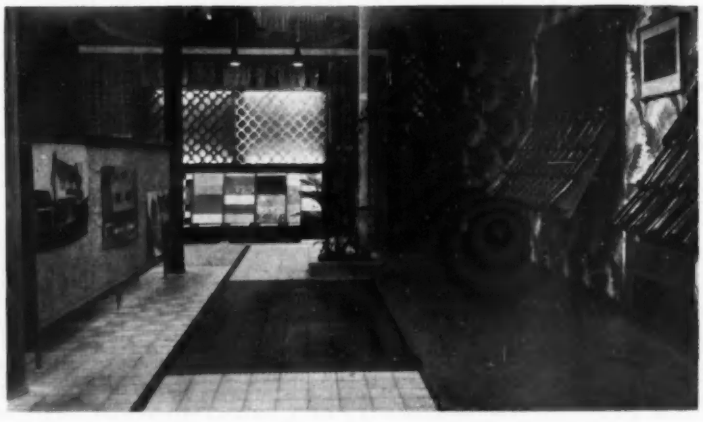
The largest exhibition of 'American art of the twentieth century' ever shown abroad will be sent to Paris this spring as part of the 'Salute to France' festival. The exhibition is being prepared under the direction of Rene d'Harnoncourt, Director of the Museum of Modern Art, 11 West 53 Street, New York, and will be shown from March 30–May 15 at the Musée d'Art Moderne in Paris. More than 150 mass-produced articles will also be shown in the industrial design section.

B I F gives brainwave award

Twenty bright ideas will be shown on one stand at the British Industries Fair at Olympia, London, and the brightest will win £200 for the man who thought of it. Judging will be by industrial experts associated with the many trade sections at the Fair, which will be held from May 2–13. There will be second and third prizes of £50 and £25. The competition, which is open to all inventors in Britain and the Commonwealth, is being run by the British

Showroom for tiles

The showrooms of Langley London Ltd in Borough High Street, London, display a wide variety of tiles. The range on view extends from tiles used in ancient Roman houses to tiles with diagonal ribs for a modern abattoir. Terrazzo, vitrified ceramic, Langboro random marble, clay roofing and floor tiles are some of the types in the showrooms, which were designed by S. A. Victor and Frederick Sage and Co Ltd. The schemes for the glazed ceramic wall facings are by Anthony Carter.



Industries Fair in conjunction with Leslie Hardern, of the BBC TV Inventors' Club. Other inventions that have been approved for showing in the TV Inventors' Club, which starts a new series in April, will also be on show alongside the top twenty in the competition. Mr Hardern, who has run an inventors' stand at Olympia for the past two fairs, found that it was an ideal shop window seen by thousands of manufacturers and buyers from all over the world. In 1953 one inventor obtained £80,000 worth of orders. Mr Hardern, who has invited 600 inventors in Britain and abroad to send in entries to the competition, said recently: "Judging by the inventions I have received in the past from countries such as Australia, South Africa and Canada, I feel sure that this award will prove an additional incentive. Inventors should contact the BIF, 9 Kingsway, London, for details."

Cotton in Australia

The Cotton Board's Colour, Design and Style Centre is holding an exhibition on 'Cotton in Australia' at 19 York Street, Manchester 2. The exhibition, which finishes on Saturday, April 16, will be open from 10–5 on weekdays and 9.30–11.30 on Saturdays.

Belgian fair

In the seventh International Fair at Liège from April 23–May 8 (DESIGN February page 50), there will be a special exhibition devoted to industrial design, including sections on 'design in packing material' and 'industrial publicity'. There will be both an American and a Belgian contribution.

PUBLICATIONS

Canadian design

A recent issue of 'Industrial Canada', official publication of the Canadian Manufacturers' Association, contained a foreword by the association's President, J. A. Calder, who says: "Good design can accomplish at least two things: it can increase the attractiveness and utility of a product, enhancing its appeal to the consumer, and it can make for greater efficiency in production. Both these effects make for greater sales. Canadian manufacturers are giving plenty of thought to the particular conditions and needs of the market to which they address themselves. It is interesting to note that in so doing they have gone a long way toward the development of a distinctively Canadian 'look' and 'feel' – a simplicity, solidity and freedom from excess which has already won the admiration of peoples like the Scandinavians, whose pre-eminence in modern design is generally acknowledged."

'A Swan Sings'

The House of Gane, makers and sellers of furniture in Bristol from 1824 to 1954, has commemorated its own dissolution with a charming booklet entitled 'A Swan Sings'. Badly bombed in the last war, the firm has since had difficulty in maintaining production and finding a market for its hand-made furniture. "There is now no class which can afford to pay a good deal more for a difference of quality which hardly shows on the surface at all." Mass-production and "the levelling of income and taste has made it virtually impossible to maintain the highest standard of quality, but the same process has raised the general standard to a remarkable extent". This booklet shows that the firm bears no grudge against the modern style: indeed it contains photographs of modern pieces produced by the firm over the last 25 years. The booklet, written by a Mr Wadman, is a gentlemanly and amiable comment on the triumph of mass-production.

Textile Institute

The Year Book of the Textile Institute, 1954–5, is now published at 15s by the Institute at 10 Blackfriars Street, Manchester 3. Also published is 'Mechanics for textile students' by W. A. Hanton, price 25s.

COMPETITION

Furniture design prizes

Prizes totalling nearly 14,000,000 lire will be awarded in the international furniture competitions arranged at Cantù in Italy, a town which has a long tradition in the technique of making furniture. The intention is to offer architects, artists and craftsmen means of showing the best designs capable of being put on the market. The entry form, which is attached to the booklet of conditions, must reach the Prima Mostra Selettiva e Concorso Internazionale del Mobile, Cantù, Italy, by May 10. When the award committee, composed of the architects Gio Ponti, who is chairman, Alvar Aalto, Finn Juhl, Carlo De Carli and Professor Romano Barocchi, has allocated the prizes, the winning designs will be executed and the furniture shown from September 17 - October 5 at the first exhibition of 'award' furniture to be held at Cantù. In allocating the prizes, particular attention will be paid to fine woodwork and the equipment and tools used by craftsmen or small producers.

MISCELLANEOUS

Housewife guinea-pigs

The Building Research Station of the DSIR recently conducted a study into the movements of the housewife as she does her housework, so that in planning small houses the architect may be guided towards designing homes that are convenient and do not waste energy in running. Ten specially selected housewives were allowed to bring small children to the mock-up house, and to use the sort of apparatus with which they work in their own houses. The study was very artificial. Eight consecutive hours were worked, including four meals, whereas at home the women spread their tasks over 14 to 16 hours. Although this alone would not spoil the argument, taken together with all the other imponderables of the daily lives of women at home – sickness, the presence of the aged, the lodger and the growing family (or all three), social life, week-ends, and so on, the value of what emerges is doubtful. The researchers nevertheless furnished and equipped the house on good modern lines, and in their publicity thus indirectly propagate the message of the CoID. C.G.T.

New SIA medal

The Society of Industrial Artists announces its new annual award, to be known as 'The SIA Medal', which will be the highest professional award for design in this country. It is hoped that the award will carry with it a significance of more than national character, as it will be given for "the most outstanding achievement in the field of design throughout the world" in any particular year. It is intended that the award shall in the main be made to designers in Great Britain, but that foreign designers shall not be excluded. The award will consist of a medal, in the form of an order worn with a ribbon. On the obverse will be the head of Minerva with the name of the society, and on the reverse side will be the inscription relating to the year and the recipient. All members of the society have the opportunity of making nominations for the SIA Medal, but the council will make the award. The announcement of the award to the first recipient will be made next autumn.

American Bar for Manchester

The Midland Hotel in Manchester has been recently fitted with a new bar. The room is separated from the foyer by a stepped wood and glass screen, and is easily visible to everybody entering the hotel. The white ceiling is in alternating solid panels and egg-crate lighting units, fitted with fluorescent tubes, framed by hardwood ribs. Hardwood inset with small illuminated panels was used for the bar front, and a hardwood lattice frames the opening. The carpet is of alternating widths of aubergine and grey. Fixed recessed seating, loose chairs and bar stools are upholstered in black, red and yellow material, and the circular brass-legged tables are designed with colour panels under the glass tops. The designer was John Carter.

Higher fees for patents and designs

Since February 1, 1955 higher renewal fees have been charged for the registration of patents and designs due to expire after April 30. This general increase is announced by the Board of Trade, which has laid before Parliament revised rules amending those made under the Patents Act, 1949, and the Registered Designs Act, 1949. In addition to providing for higher fees, the Patents Rules have also been amended in minor respects, to make them conform to the requirements of the European Convention of December 11, 1953, relating to the formalities required for patent applications.

Change of address

The Fibre Building Board Development Organisation Limited (FIDOR) has moved from its present offices to larger premises at 47 Princes Gate, Kensington, London, SW7. This removal took effect on February 28.

LETTERS

Reflections on a mirror

SIR: What has happened to DESIGN's judgment that it should prostitute its ideals and describe Lady Casson's mirror as 'elegant' (DESIGN January page 13)? The outline is ugly, the decoration fussy in the worst Victorian way and I can imagine one's reflection would appear to be infected with measles! I should be glad to know how you justify your choice.

JAMES C. STEVENS
87 Hadley Road
New Barnet, Herts

SIR: Your writers have always pointed out any shortcomings in the appearance of an article under review, even when the major problem of performance has been solved. This is as it should be. Designing something purely decorative, because of its wider scope, I should say presents fewer difficulties.

I see now that my own small instinct for feeling whether a thing is 'good' or not, aesthetically, is totally unreliable. This change has come about because of the article appearing in your January issue, dealing with the Glass Manufacturers' Headquarters. There is a photograph included showing a mirror designed by Lady Casson, which is described in the caption as 'elegant'. My own reaction to this mirror was something akin to horror – it appeared to me to include all the vulgarities of the 'modernistic', leavened only slightly by a diluted form of Gin-Palace engraving. To my mind, 'elegant' suggests grace and refinement – qualities I feel to be lacking in this shape.

Yet before this design was carried out, no doubt other people involved in the whole project made suggestions and signified approval. Am I then to believe that I am alone in my lack of perception?

WILLIAM HEWISON
45 Earls Court Square
London SW5

The author, Wyndham Goodden, comments:

"I notice that the writers of both these letters live in, or near, London: and to someone who has actually seen these mirrors, amongst other things, and tried to convey something of their quality to your readers, it seems strange that neither of them bothered to visit the Glass Manufacturers' Federation building and judge for himself. I think I was careful in my article to point out that photographs by no means did it justice.

"It is as easy for me to say the outline is *not* ugly, as for your correspondent to say "the outline is ugly". You, sir, asked me to be your critic on this occasion, and we must leave it at that. Your correspondents do, however, correctly fasten on one of the qualities which make these mirrors, in my opinion, and in the opinion of the owners who see them every day, not only elegant but downright pretty – the Victorian 'gin-palace' engraving. Because there are bad examples of this in pubs (which even there are meant for decoration, not for shaving in), one must not overlook the good examples, which are numerous, nor condemn it altogether. Lady Casson has used the best elements of Victorian elegance – which here in any case stem straight from seventeenth-century Venice – to produce a pair of ornaments which in themselves, I do assure your readers, look brilliant and distinguished; and evoke the diamonds and chandeliers of real palazzos much more than even the most crystal gin."

'Forging ahead'

SIR: I have read your leading article entitled 'Forging Ahead' (DESIGN February page 7) and congratulate you upon your courage in tackling the very difficult subject of plagiarism. If I may say so, however, the second paragraph does rather leave one with the impression that because the copyist must necessarily experience a time lag, which enables the originator of a design time to become established and to develop his product as well as the market for it, there is no need for profound anxiety about the copying of his goods. This attitude should be hastily corrected. The fact is that an original design may not appeal, at first, to more than the discerning few. Moreover it may well need a good deal of development. After a year or so, when a great many people are prepared to accept the design as being 'contemporary', the copyist may borrow (or buy) one of the products and proceed to copy it. He may make a reasonable job of it or not. The originator may lack the capital resources to advertise and to make the product in large quantities, yet during the years he may have put in a very considerable amount of effort in making known the design and in gradually building up the production – as fast as taxation will permit. But all this can be negatived by a copyist lacking in moral scruple but with the means of large production and distribution. Naturally, the originator of the design will come forward with more good ideas, but it is a bit sickening to feel that, like the cat, one's sole salvation lies in producing lots of litters! Anyway, congratulations on your courage in tackling this problem at all. Could we not have an authoritative article on the various methods of legal protection of design so that a wider appreciation of the problem will exist? Or would this encourage more copyists?

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Books for schools

SIR: The topic of books for schools has again arisen in your columns (DESIGN February page 53). As one who has had experience of many such books I should like to make the following observations. Almost all the books published in school craftwork are very poor indeed from the design point of view. Generally designs are considered suitable if there is no applied ornament, the shape simple and if the work is finished in wax. Usually the text refers to good proportion and then the topic is considered covered. In fact, this might be said to cover the view of educationists in general towards design – in teacher training and by inspectors as well as in books. Lip service is paid to the value of good design in school craftwork, but it never seems to get into practice. This attitude has meant that at best school woodwork is usually clumsy, ill proportioned, and lacking in considered detail, though usually well constructed.

Books on school craftwork have exercised a very strong influence on the design of work made in the workshops, because a great many teachers simply lift these inept designs straight from the books (which is of course why they are written). Thus boys work from the same poor designs year after year. Some books still in use have been reprinted over twenty or more years. Schoolboys cannot design a small piece of wood or metalwork themselves but surely their teachers should be able to shape the boys' crude ideas into a satisfactory individual design – so that the boy realises that designing is a necessary and important part of the process of making something. It seems that until teachers have training which will help them to tackle the problem of designing the articles made in school workshops, these books will continue to find a ready market. This result could be achieved if the training of teachers in wood and metalwork were treated in the same way as the training of specialist art teachers, instead of the curiously mixed training they now undergo. I am glad to see that the correspondent in the February issue of DESIGN wishes to enlist the aid of capable designers outside schools.

THOMAS R. BENNETT
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Caravan controversy

SIR: As a caravan user for some years, I have read with the greatest pleasure your articles on their design. The most lively joust between Mr Panter and Mr Johnstone interested me in particular, and confirmed my views that present manufacturers and designers have a long way to go. Although it is true that many practical points in Mr Johnstone's design were open to criticism, in particular the placing of the gas cylinder, (has Mr Johnstone ever lifted one?), the heavy front loading, and the front brake, which must surely be accessible at once in an emergency, I felt the aesthetic criticism levelled by Mr Panter was somewhat ill-placed. Here surely is a clear case for a real liaison between men of ideas trained in design, and men of practical experience in a specialist field. One day we might get a really well-designed caravan!

JOHN LACEY
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Paper lampshades

SIR: In DESIGN February page 53, you published a letter from Hans Schmoller dealing with paper lampshades and illustrated with two pictures. Mr Schmoller states that the principle upon which the Le Klint paper shades are based is not as new as people believe. He remarks that in 1924 Marie Schmoller took out a patent on lampshades of folded paper, and that in the late 'twenties and early 'thirties she granted a licence to a Danish manufacturer. Whether this was the beginning of the Le Klint shades Mr Schmoller has not been able to find out.

As information for your readers and Mr Schmoller, I enclose a reproduction of one of the first folded paper lampshades with a broken form made by the architect P. V. Jensen-Klint in 1901. The shade is attached to a petroleum lamp in ceramic designed by the same person. Jensen-Klint's sons, Professor Kaare Klint and the manufacturer Tage Klint, learned the technique in childhood and started a production of paper lampshades in co-operation with Le Klint, the daughter of Tage Klint. Le Klint is thus the third generation in the undertaking, and the family has developed and created many lampshade forms now known throughout the world.

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BOOKS

Decorative Art, 1954-55, *The Studio Year Book of Furnishing and Decoration, edited by Rathbone Holme and Kathleen Frost, The Studio Ltd,* 30s

The 1954-55 edition of *Decorative Art* is a good publication and is to be recommended. As in previous years, it is mostly a collection of photographs; in this issue there are over 400, with 16 of them in full colour. This type of book is read in public libraries, and is used as a work of reference by designers and students. For those in close touch with the design world it has nothing very new to say, but this is not an adverse criticism. The most important aspect of *Decorative Art* is the effect and influence it will have on the majority of its readers, and these are likely to be art students in provincial schools and members of the public interested in furniture and decoration. For the last three years this publication has been sold out, and this has almost certainly been due to the improving quality of the work.

The book is divided into eight sections: Modern Houses: Interiors and Furnishing; Silver and Tableware; Lighting; Textiles and Carpets; Ceramics; Glass; and Decoration. The last section is really mistitled. It only consists of four pages and is mostly concerned with flower decoration. The earlier sections are well arranged and are preceded by an article on Pattern and Texture in Architecture, by Christopher Gotch. One feels that the purpose of this article is to shake up the ideas of the layman who has pinned his faith to a prim, good taste monotony, and show him what exciting things can come from pattern and texture alone. This is a valuable service, and one must forgive some of the rather sweeping statements. There are many people in Mr Gotch's profession who would certainly not agree with all he has to say, but in the fight against "cream throughout with chocolate dadoes", one must not divide the ranks by too much argument.

In the Modern Houses section, the examples are all well chosen, though I believe that larger photographs of fewer houses, but with more plans, would have been an improvement. The Interiors and Furnishing section also shows the work of a really able selector, and the examples seem to reveal this country as well in the lead in furniture design. One has been aware that ever since the war the development of the modern idiom in France has taken a rather unhappy turn, but it is difficult to believe that work selected by Pierre Vago is a fair example of the best the French can produce. The sideboard illustrated on page 31 and the cane chair on page 53 should only appear in this type of book as an awful warning. The Italians are sometimes sumptuously vulgar in furniture design, but they never sink as low as this. The Silver and Tableware section is well up to the standard of the other divisions. The ceramic pepper mill and salt shaker, exquisitely designed by Olde Thompson, reminds us that this material is really a more suitable medium for the sophisticated table layout than the rather dull turned timber variety, which, though good in itself, should not have been seen outside the 'cultured cottage'.

The Lighting section is very small compared with the rest. Most of the examples are up to standard, though the simplicity and common sense of Hollmann's designs will always place him above those who seem to be striving for new and startling effects. The Textile section has nothing very outstanding to offer except, perhaps, for a rug designed by Frederick Manning. One would like to see many more colour photographs and if this is not possible, the description should show by diagram or other means where the various colours occur in the pattern. In the Ceramics there is a heavy concentration of work from Scandinavia, but from my memory of the Gustavsbergs' Studios, they have more exciting work to offer. The Glass section also draws heavily on Sweden, but includes one or two incredibly vulgar pieces which, one might have guessed, come from France.

Where photographs of isolated objects appear in a book of this type, the description must include a reference to the article's size. The Ceramics section does this very well, but it is sometimes forgotten in the divisions dealing with Glass and Silver.

MICHAEL PATTRICK

Esempi, Sale di soggiorno, Camini, *Roberto Aloi, Ulrico Hoepli, Milan,* L.2,600 *copies obtainable from Alec Tiranti Ltd, London*

Roberto Aloi's 'Esempi', like 'Decorative Art', claims to be international in the scope of its selection. If 'Decorative Art' was a little mean in the space allowed to Italy, the compliment has been doubly returned by giving a minute selection of English examples, and practically nothing at all from Scandinavia. Both parties might have improved their publications had they consulted each other's work. As with 'Decorative Art', 'Esempi' is a collection of photographs of modern interiors, with a short preface in Italian, dealing with the historical development of furniture in Italy. All the illustrations in the book have Italian captions, but these are also translated into both English and French in a consolidated index.

The book shows quite truthfully the present trend in furniture design in Italy. The photographs are well taken, the standard of design on the whole good, but most of it unmistakably Italian with a strong accent on voluptuous glossiness. Most of the interiors seem to suggest free planning, but there are no plan illustrations, and in some cases it is difficult to believe that the rooms are actually used with the same disposition of furniture shown in the photograph. It is encouraging to see that the Italians have no fear of mixing modern and antique furniture in the same room. They are also not nearly as shy of the fireplace as the contemporary English designers seem to be. The results are not always successful, and are sometimes horribly pretentious.

When the book does give space to non-Italian work, it draws its examples mostly from North America, and the interiors of Saarinen and Neutra, showing the unmistakable stamp of genius, make so much of the rest look like the work of the over-eager amateur.

MICHAEL PATTRICK

Industrial Design in America, 1954, *The Society of Industrial Designers, Farrar, Straus & Young, New York,* $12.50

"Let us be careful that we do not trade spiritual values for material values", writes Arthur Houghton Jr, president of Steuben Glass, in his introduction, and in pointing to the many "smooth pieces of engineering" that now pass for designs, he makes a plea for the richness of decoration. How do the products skilfully arranged by Alvin Lustig on the 200 pages of this book measure up to this demand? Certainly the Americans, more than any other industrial community, have taken the machine into the home, and done it with astonishing speed and enthusiasm. Products for a mass market have to be made in thousands, as Mr Houghton reluctantly admits, not only in print but in the practice of his Corning glassworks. But what of the extra bits, the richness that delights the eye after the function has been accepted? Again the Americans are aware of what is wanted, even if some of their leading designers have not yet shown themselves capable of very sensitive work. They see clearly that surface finish, of which decoration forms an important element, is no less important to the total design than the mechanism that may be hidden beneath the covers. Many designs in the book admit this, but the chief lesson for us is the apparent (and actual) engineering origins of the decorations used. Metal castings and stampings and plastic mouldings figure prominently, not as hackneyed scroll-work, jazz angles or borax 'speedlines' but as exercises in three-dimensions. Abstract motifs are worked up to exploit the changes in colour or texture of another material. And like the material itself, many of the decorations appear to be indigenous. American designers have been bold in their revival of machine-made decoration; no more is there much enthusiasm for the silence and simplicity of 'pure' form.

This survey leaves few items of mass-produced design unaccounted for. Apart from a full range of domestic and office appliances it includes tools and motor-cars, pottery and furniture. A small foreign section, with only four British products, makes a sad conclusion.

M.F.

A Handwriting Manual, *Alfred Fairbank, Faber and Faber Ltd (revised and enlarged edition)* 12s 6d

An instructive and highly readable book that should interest the expert and encourage the student. In his introduction Mr Fairbank rightly says that "Handwriting when considered as an art is calligraphy . . . [but] . . . beauty is not a decorative external element which can be added to a script and thus transform it, so that it can then be called calligraphy". He stresses the importance of good tools, the right pens and paper, the correct position and so forth, and illustrates his points with diagrams and photographs.

M.-J. LANCASTER

Designers in this issue

Ian Audsley (20). John Barnes, MSIA (44). Misha Black, OBE, FSIA (10, 13). Anthony Carter (45). John Carter, MSIA (46). Sir Hugh Casson, RDI, MA, FRIBA, FSIA (13). Lady Casson, ARIBA (13, 47). Richard Chick, ATD, MSIA (29). A. K. Claiden (28). E. L. Clinch, MSIA (19). Robin Day, ARCA, FSIA (19, 22). Jane Drew, FRIBA, AADipl (11). John Farleigh (11). David Fowler, MSIA (19). Maxwell Fry, FRIBA (11). James Gardner, OBE, RDI, FSIA (10). Professor R. Y. Goodden, RDI, ARIBA, FSIA (20). Ronald Greaves, ARIBA (43). Richard Guyatt (13). Patrick Gwynne, LRIBA (40–1). J. A. Hanauer, MSIA (29). Charles Hasler, MSIA (14). Peter Hatch, MSIA (Art Editor). Peter Hayward, MSIA (20). J. Christopher Heal, FSIA (21). F. H. K. Henrion, MBE, FSIA (cover). Robert Heritage, MSIA (18, 22). Denys Hinton (8). J. K. W. Hopgood, MSIA (46). Clarke Hutton, MSIA (14). Richard Huws, BEng (Hons), FSIA (36). Ronald Ingles, MSIA (18). P. V. Jensen-Klint (47). Finn Juhl (12). Tom Lupton, MA, AADipl (22). Eric Lyons, FRIBA, MSIA (45). Eric J. Marshall, MSIA (29). A. J. Milne, MSIA (21). John Morton, ARIBA, AADipl (22). Robert Nicholson, MSIA (12). Roger Nicholson, ARCA, MSIA (12). Jo Pattrick (45). Michael Pattrick, ARIBA (45). R. W. Pepper (46). Ernest Race, RDI, FSIA (21). A. M. Rankin (8). Peter Ray, FSIA (11). Tibor Reich, FSIA (28). Stanley Rickard (46). R. D. Russell, RDI, FSIA (20). W. H. Russell, FSIA (20). Laurence Scarfe, FSIA (14). Eric Sharvell (42–3). Basil Spence, OBE, FRIBA, FRIAS, FSIA (10). Sheila Stratton, ARCA, MSIA (9). Jillian Vasey (44). S. A. Victor (45). Nigel Walters, MSIA (22). W. Symes Watt (29). Frank Whitton (22). D. Woulfe, MSIA (37). M. B. A. Yehia (15).